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ELMER BROS. NURSERY

SAN JOSE, CALIFORNIA

A BOOK OF INFORMATION ON FRUIT CULTURE





Cherry growers recognize the superiority of our Di Fiore strain of
Royal Anne trees

ELMER BROTHERS

NURSERY

WITH A PERSONAL SERVICE

Book of Information on Fruit Culture



All Varieties of Fruit, for Home Gardens as Well as Commercial

SANTA CLARA VALLEY—OUR HOME

Beautiful Santa Clara Valley with its ideal climatic and soil conditions is the home of our trees. Universally we have gained the reputation as "the nursery that helped to make Santa Clara Valley famous." This is due to the fact that our stock is of a very superior grade, and, also, to the fact that we have introduced many imported strains which have all necessitated the most careful study and selection. A great deal of our stock is now pedigreed, and we are able to trace its record back for many years.

We are always glad to receive inquiries seeking information and advice regarding fruit culture. We want our years of experience as nurserymen and growers to be of service to the planter in every possible way.

“Coöperation” Our Motto

We have carefully prepared this catalogue on the planting, pruning, and growing of all varieties of fruits, nuts, berries and grapes, etc., with the aim constantly before us of being of some service to the fruit grower. The planter will always find us willing and ready to be of any assistance whatever, such as helping him select suitable land, and the best varieties to plant in such land, because we believe the man who is starting a new place should have every assistance available. We feel that our efforts to coöperate with the planter have been largely responsible for our success as nurserymen.

We have had thirty years of valuable experience in the nursery business, and we urge that every planter feel free to write us for any information he may desire along these lines. In the remaining pages of this book we have endeavored to go thoroughly into the matter of planting and pruning, and we have given graphic descriptions of all the fruits, etc., that we propagate.

If, however, the grower at any time should have any problems connected with the planting of his stock we will be only too glad to help him solve his difficulties, as we believe complete coöperation alone between the planter and nurseryman can lead to the success of both parties.

Trees Known to Be Prolific Bearers

The most important factor in successful fruit tree culture is in knowing that there are two kinds of wood in each tree from which scions or buds are selected. These two kinds of wood are fruit wood and water sprouts. It is of vital importance to be able to distinguish between the two, and many nurserymen are not able to do this. Therefore, they, many times, select the water sprouts, which are poor bearing and often produce small fruit. These same water sprouts produce large trees in the nursery row which, of course, appeals to the buyer. We have been in the nursery and fruit growing business for thirty years and during that time have gained some valuable experience which we want to be of benefit to the fruit grower as well as to ourselves.



Trees Baled and Ready for Shipment

The importance of breeding stock such as cattle, hogs, and horses from known parentage is clearly shown by the excellent results that are produced. Naturally this same principle will apply to fruit trees, and is the principle that guides us in the propagation of our trees. The trees from which we select our scions are known to be bearing trees; are known to be trees that produce the very best fruit; are known to be trees that are clean, free from disease, and sturdy.

Every Precaution Taken

Instead of trusting the selection of scions to employees, this highly important matter is entrusted to a member of the firm, a man thoroughly trained in the nursery business. This is the reason our trees always give satisfaction to our customers.

Our Stock

Nowhere are climatic conditions more suitable for the cultivation of perfectly developed trees than right here in the Santa Clara Valley. There is a long growing season which allows the tree to reach maturity in an easy and natural manner, so that when it is dug in December the wood is firm and compact and in perfect handling condition. We have nurseries in Placer and Yolo counties also.

"Reliability, Quality, and Service From the Roots Up"

In order to produce trees that are marketable, the kind we sell to our patrons, it is imperative that the utmost care be taken in the selection of seedling stock, in cutting buds from prize-winning orchards, in scientifically budding the seedlings, and in giving the new trees the very best cultivation. When our trees are ready for market the most modern digging methods are used. They are dug so that the entire root system is left intact, which is very necessary for successful transplanting. After the trees are dug they are sorted and graded, tied in bundles of ten, and each bundle labeled. They are then immediately placed in trenches, which fact assures the buyer that the roots are kept moist and are not allowed to dry out, thus causing no injury to the stock.

All our stock is very critically graded in order that our customers may be certain of receiving the size and grade of trees ordered. Due to the very important fact that all trees do not have the same habits of growth, that is, some make a light growth while others are stocky and robust, our grading is ruled by caliper measurement as well as height.

Throughout the entire growing and digging seasons our nurseries undergo a rigid inspection. Upon the completion of these investigations our inspectors never fail to give us a certificate of inspection and to furnish us a clean bill of health for every consignment as our shipments are made.



Peach Blossoms

TO THE PLANTER OF FRUIT TREES:

In this modern era we cannot overlook the fact that business is being segregated into two divisions. The first is the everyday transaction where both the buyer and seller live up to their end of the bargain, resulting in a deal in which both parties are satisfied. The other class, perhaps, is not quite so common; nevertheless, it is important enough to occupy a prominent place in the minds of all concerned. In this class the merchant either secures the benefit from being honest and square with his customer, or on the other hand, he may gain the undesirable reputation of what may be termed graft. That is, he is right there to take the client's money in return for any poor services that he might render. He is disinterested in his client's welfare, eager to take his money, thinking only of personal gain for himself with as little effort and expense on his part as possible, thus making the customer a victim of that well-known practice, deceit.

The practice of deceit is very seldom carried through successfully. It usually takes but a short time for such a transaction to be discovered. Here is where the nursery business differs from most any other kind of business. It is every nurseryman's highest aim to produce a stock as near perfection as possible, and to go on producing such a stock year after year. This is a business that is not built up in a day—but it takes years of concentration, careful study, and diligent labor to build up such a concern as we have today. We do not consider our nursery as purely a money making machine, but rather as our life's work—a legacy handed down from father to son. We consider it our duty to our customers to secure buds, cuttings, and scions from the very best trees—trees we know to be in perfect condition and suitable to the soil in which they are to be grown, for it is not our desire to sell stock to our customers that we would not want to plant ourselves. Above all, we consider it our duty to be of greatest service to our patron by advising him what, how, and when to plant.

ITEMS OF IMPORTANCE

The primary factor to be considered when planting for profit is the radical soil and climatic differences which often occur in the same orchard. In fact, it is the very clue to successful fruit cultivation here on the Coast.

Another important item to bear in mind is that of having the land in perfect condition when the tree is ready to be planted. First plow the ground thoroughly and then harrow it until it is as porous as an ash heap, so that the air may circulate freely through it. The importance of subsoiling cannot be too greatly stressed. Although it may necessitate a little additional expense, the planter is amply rewarded when he discovers the fine deep root system and heavy growth which it promotes.



Happy Prune Pickers on Account of the Large Size Which Makes Picking Easy

If irrigation is used it will be necessary to resort to grading in order that every portion of the ground may be reached from small streams running from the main ditch. Do not think that grading simply implies leveling, for it is of prime importance that the surface soil be disturbed as little as possible. It is a serious mistake to cut down the surface of the land for several feet for the purpose of bringing it under a ditch. If such a condition arises it is much wiser to pump the water from a ditch to the higher level, thus maintaining all the qualities necessary to a good soil. The growth and fruitfulness of the trees will more than repay the slight expense of pumping when it is compared to the poor growth and scant bearing of the trees when the top soil has been removed to any depth. Drainage, also, should be given careful attention, especially where the land is low and water is allowed to remain near the surface during the months of spring and summer.

PREPARATION FOR PLANTING

Preparing the tree for planting is naturally one of the vital steps in the life of the tree and therefore should be given very careful consideration. The roots should be minutely examined just before the tree is planted, and all the damaged roots and rootlets cut away to a smooth surface with a sharp knife. When this is done the tree is ready to take its place in the orchard.

Sometimes planting is delayed for some unforeseen reason and a warm spell sets in during February and March causing the buds of the trees to start. This may be remedied by taking them from the trenches, shaking all the dirt from the roots, and placing them in the sun for twenty minutes in the morning on a quiet day. In this way the new rootlets are dried up so that by heeling in the trees in a sheltered place their dormancy may be prolonged for a few weeks longer. Then comes the important process of setting out. Two persons can do this quickly and easily in the following manner: One person holds the tree in a vertical position, while the other fills in the loose dirt, carefully spreading out the roots in as natural a manner as possible. The surface soil is first put in among the roots, great care being taken to fill in earth so that each root comes in direct contact with the soil. When the hole is two-thirds full the earth should be compactly packed about the roots. Be careful about setting the tree too deeply, however; allowance must be made for settling of the soil. The tree should stand at least two inches above the surface of the soil. The tree trunks should be supplied with tree-protectors until the tree can furnish its own shade wherever hot weather prevails.

How to Receive Trees

When trees have reached their destination they should be unpacked without delay, the roots trenched and completely covered with soil which should then be thoroughly dampened. If the shipment is delayed in transit, thus allowing the trees to become dry and to suffer the effects of exposure, immediately place the trees in a tank overnight and the next day bury the entire root in moist soil until it resumes its normal condition. Then and only then is it safe to plant them. If the trees should be frozen en route place the bundle in a cellar, or any place where the frost will not reach it, until they are completely thawed out. Then they may be taken out, unpacked, and heeled in ready for planting. By carefully carrying out these instructions you will find the trees uninjured even though they have been frozen.

We advise purchasers who live in localities where the seasons are much later than ours to instruct us to send stock while it is still in the dormant condition. If due to the fact that extreme cold weather will not permit early planting, and the customer will so advise us, we will delay shipment of an order as long as we can possibly do so. When the consignment is received it should be carefully inspected to see that the roots are intact, which may be done by removing a board from the container. Do not disturb the contents of the package, but place the case in some cool, dry place, such as a cellar or



French Prune Planted One Year Ago
Last Spring

cold storage plant, which has a temperature of about 35 degrees Fahrenheit until the opening of the planting season. We feel certain that you will find this method of handling trees to be entirely practicable as we have been using it successfully in making shipments to foreign parts.

Everywhere successful orchardists are more and more becoming reconciled to the fact that simplicity in planning an orchard will net the best results, and that the square system seems to fulfill in every detail all the needs. Except where the economy of ground is the main factor, we advise this method exclusively.

How to Plant

By far the most important factor in planting is to see that your ground is in the best possible condition. This cannot be stressed too strongly, for on it depends the success of your planting. Through the absence of clods the fine, loose soil packs around the roots when tramped in, thus being able to retain the moisture in case there should be no means of settling the trees with water after planting. A good condition of soil further expedites the work of the men setting the trees.

The next important step to be considered in planting an orchard is laying off the land, having one side and end of the field at right angles. A transit is the best method of establishing base lines when there are no regular subdivisions from which to work, or where there is much planting to be done. What is more displeasing to the eye than trees that are out of line in an orchard? A redwood stake about half an inch square and ten inches long is a very convenient size as a marker for the setting of trees. By dipping about six inches of one end of the stake in whitewash, any stake that may be out of line can readily be discerned. A tree setting board should be procured before digging the holes. This is made from a 1x4 board, four feet long, with an inch hole at each end and a notch in the center. The notched center is then placed against the stake where the tree is to be planted, a stake is then pushed into the ground through the holes at each end of the planter, and the center stake is removed. The hole, not less than twenty inches in diameter and twenty inches in depth, should now be dug. When this is done place the board again over the end stakes in its former position, and plant the tree with the trunk resting against the center notch in the board and you will find it to be in the very same place as the stake which was removed for the digging.

How Deep to Plant

The method we have found to be the safest and most reliable under ordinary conditions is to set the tree so that it stands in just about the same depth as it did when in the nursery row. By that we mean that it should stand in that position after the ground has settled so that after the soil has been worked to its natural level the bud will be two inches above the ground.



We want to impress upon the planter the fact that deep planting is not desirable. Deep-planted trees are very likely to suffer if irrigation is used, for the water level rises when the soil becomes saturated, and many trees fail to grow because they have been planted too deep.

Protecting Trees From Sunburn

It is very necessary that the young tree be guarded against sunburn, as it is very tender and must be carefully protected. One of the best ways to do this is to wind strips of burlap around the stems, starting just below the ground surface and continuing to the points where the new shoots will appear. After these have started, loosen the strip and rewind it so that the bark between the shoots is protected. Now fasten the top with a few stitches with a twine needle. Tree protectors made of Yucca palm, which are easily adjusted around the trees, are now on the market, and can be purchased for a small amount.

One of the most commonly used preventives of sun-burning is whitewash. This is used both for young trees and for old trees where the bark has been exposed through pruning, grafting, etc. As sunburn is not alone confined to summer months, it should be continually in use. We have listed below a few good recipes on how to make whitewash.

Slake sixty-two pounds of quicklime into twelve gallons of hot water. Then dissolve two pounds of common table salt and one pound of zinc sulphate in two gallons of boiling water. Pour the salt and zinc mixture into the lime. When ready to use thin with cold water until the mixture flows easily.

Another recipe: Dissolve five pounds of salt in six gallons of hot water and use this to slake thirty pounds of lime, stirring in one pound of cheap glue while the lime is still hot from slaking. Add water to the desired consistency.

If the solution is to be used with a spray pump it is necessary to strain it through burlap or a fine wire screen.

Beware of using white lead and oil paint, or any kind of mineral, because it is very dangerous and causes serious injury to young bark.

Blasting the Holes

Blasting is one of the requisites of hardpan soils in preparing holes for planting trees. Actual application has proved that blasting is necessary to the development and growth of trees not only in hardpan soil, but in any soil that is by nature hard and compact. One can readily understand that a fine, loose soil where the roots may easily spread in all directions is much more conducive to a well matured tree than heavy packed soil would be.



Prune Drying

Making the Orchard Bear

Fruit culture is one of the foremost industries of our country today, and therefore should be given the most due consideration. In no other occupation is the use of muscular and brain activity more constantly in use than in this. If the orchard is given poor and slovenly care, that is the kind of harvest that will be reaped; if the orchard is given painstaking and diligent care, such a harvest will be reaped. One of the essential points to be remembered in planting an orchard is to plant as much of the same variety as possible. When the grower starts the practice of planting various kinds of trees he is going to find it difficult to dispose of his crop, for the packer does not want fruit in small lots but in quantities large enough to warrant his handling it.

Another common error among planters is to exact too much from a young tree, that is expecting it to do the work of a full grown tree. The two or three year old tree should not be expected to yield a large production as it is still in its infancy, and the growth and development of the tree can be seriously injured by such practice. When this is done all the profit is expended in nursing the tree back to normalcy, and very often such a demand ends in the death of the tree. Where the tree is given the proper care and attention the planter will find that his efforts are amply rewarded. The grower need not feel alarmed concerning a market for his crop, for there are always organizations anxious to open up new institutions wherever there is the slightest encouragement.

If young trees are inclined to bear too heavily they should be checked by pruning. Pruning is a very essential part of the tree's cultivation and requires much thought and study as well as skilled labor.

Every tree should be cut back when it is planted. Successful planters all over the state have found this to be very essential to a heavy-producing orchard. The next winter three or four branches, evenly distributed around the body of the tree, should be left to form the head. All laterals should be cut away from these branches to six inches. These leaders will later form the framework of the tree. In order to avoid an unsightly crook in your tree be sure that you do not shorten in a lateral starting near the terminal point of any of the branches. As a result of the first year's pruning you will find your trees to be large, stocky, and healthy. Intensive thinning will be necessary the second winter, and the pruning done so that the frame work branches will spread out. When the thinning has been accomplished, one-half of the growth of the present season should be cut off. The beginner may think so much cutting may prove disastrous to the tree, but we assure you that this method is perfectly safe as we have used it repeatedly in our own orchards to great satisfaction.

Two or three laterals should be distributed on each of the main stems in the third year, and they in turn should be cut back at least one-half or more if the growth is heavy. Although the tree should be matured and bearing in the fourth year it should still be pruned regularly every season. If intensive pruning is not done the new growth will all be at the top of the tree and the branches will be long and spindling. Do not make the mistake of harvesting in the third year, because the branches are not strong enough to bear such a heavy load and are so tender that they are very susceptible to sunburn. By conscientious pruning you will find that your harvesting is greatly hastened, because the branches are low and the fruit is easily picked; that the life of your tree is lengthened because there is less probability of the limbs breaking; that the strength of the tree is much greater making the use of props unnecessary; that the low tree with its leafy top forms a protection for itself against the sun.



Tuscan Cling Peach Tree, Two Years Old

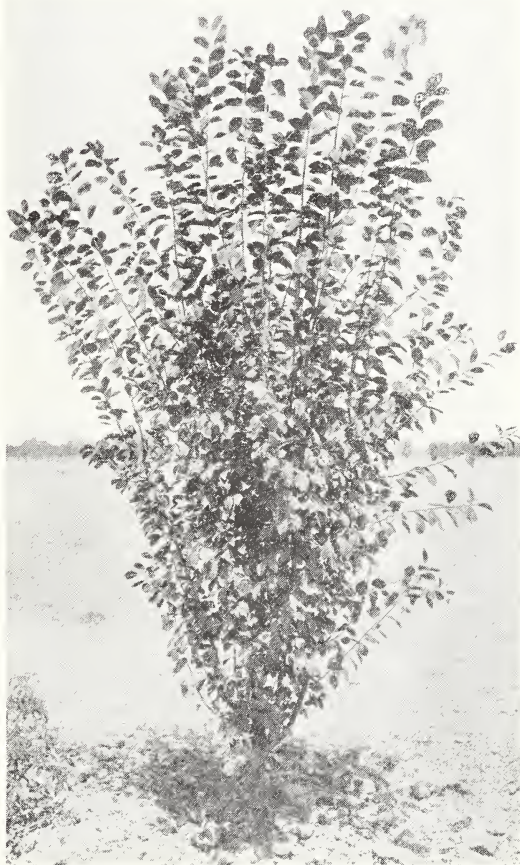
Pruning Trees at Planting Time

Never fail to cut back a tree when it is planted. This is a most important step in the cultivation of a tree. It is only natural that some of the root system should be destroyed when the tree is removed from the nursery and the top should be reduced correspondingly. Although the top may look fine and there is a temptation to retain it the tree will be weak and will never regain its proper strength by so doing. Should the moisture supply be short the trees often die the first summer which otherwise would have lived had they been cut back when they were planted.

Important Pruning Details

Every beginner who is going to undertake the important business of pruning should have definitely in mind an aim to be accomplished. He should secure all the possible knowledge that careful observation, study, and experience can yield him; modify the method to meet his own particular needs; study his own tree diligently, for it will disclose to him its various problems better than any material taken from books on the subject. However, one needs theory along with practical application and all the reading, discussion, and instruction that one can obtain is very beneficial and will save time, mistakes, and money.

For all the processes of tree cultivation the tree which branches near the ground is the most quickly and economically handled. The low tree with its obliquely rising branches is by far the easiest tree cultivated. In order to cultivate the tree with horizontal branches it is necessary that the head be carried high enough to allow free passage underneath, and to do this great expense is incurred. Many times when trees are pruned high the expense of picking is so great that it consumes most of the profit, whereas if they had been pruned low all the returns might have been rated as gain.



The Kinds of Orchards Our Trees Make

SELECT YOUR NURSERYMAN AS YOU WOULD SELECT YOUR BANKER

Since investing your money in nursery stock implies a permanent proposition, should you not be just as cautious in the selection of your nursery as you are in the selection of your bank? Certainly you would not be willing to trust your money to a bank whose reputation is in any way questionable. As this is true of the bank so is it true of the nursery, and perhaps in no other commercial activity is the factor of selection more essential.

In years to come the trees you plant now will determine the amount of money that you will be able to deposit in the bank, for you are interested in the business of money making or you would not be planting trees. When you place an order for trees with a nursery therein you place your confidence, and you are entitled to the very best of stock and service that only a nursery with a well established record and reputation can give



One Year After Planting J. H. Hale Tree of Our Round Tuscan Type

you. You have constantly before you the fact that upon the growth of your trees depends the degree of your success. The conscientious nurseryman has your success and welfare constantly before him, for upon it depends his own success.

If you plant a tree with the backing of a nursery of many years' standing you have an investment that will yield you a profitable return year after year; but if you plant a tree such as you might purchase from a nursery dealer who presents an attractive offer of unusually low prices you have an investment that is questionable, for here the peddler assumes no responsibility whatever. His is a short-lived business, and he is continually moving about, from one place to another. Therefore, follow the policy of selecting your nurseryman as you would your banker. Know him to be one who is honest, reliable, and prompt to deliver the very best quality of goods.

ROOT STOCKS AND THEIR ADAPTABILITY

MYROBOLAN—A variety of wild plum used as a root stock upon which to graft prunes, plums, and apricots.

Myrobolan is an exceedingly sturdy grower; it grows best in sections where there is a brief period of moisture as it is a deep feeder.

Myrobolan has a capacity for as much water as the standard French pear root and will survive in soils too wet for the peach, almond, and apricot root.

Myrobolan root thrives best in deep, rich, black, or sandy loam, such as is found in bottom land, or in a deep, fertile, heavy, black soil, such as is found in our Coast valleys. Although it is a deep feeder it is greatly aided by irrigation in dry climates.

Myrobolan is the very best root for prunes, plums, and apricots in any section where there is more moisture than the apricot, almond, or peach root can survive. The same thing is also true of plums.

PEACH—The peach requires locations where there is good drainage. Since it is a surface feeder, shallow soil locations where the hardpan comes within two feet from the surface are best suited to the peach. It is a vigorous grower in well-drained creek and river bottoms.

Peach root is one that is greatly benefited by irrigation. This root should be used exclusively to propagate any specie of peach.

Peach root should always be used for plums and prunes on any location where this root thrives, such as light, sandy formations, shallow soils, or decomposed granite.

ALMOND—Always use the bitter almond on the almond. As the almond root is a deep feeder it is best adapted to locations where there is good drainage and deep soil.

Do not plant this root where there is a slow drainage system, or where there are periods of excessive moisture, or where the water line rises to within six feet of the surface. In such a location the peach root is preferable. However, on a location where there is no irrigation, but where well drained, deep soil prevails, the bitter almond should be used as the stock for the almond.

APRICOT—The apricot root is in many respects similar to the peach and requires the same deep, well-drained soil. It endures about the same amount of moisture as the peach, but not as much as the myrobolan.

Always use the myrobolan root for the apricot on bottom lands or heavy valley loam locations.

MAZZARD CHERRY—This is a hardy grower and a deep feeder. Although it will not endure a great amount of moisture, it endures more than the mahaleb, and will do well on locations suitable to the peach and apricot root.

The mazzard cherry root is by far the most widely used for cherry planting. Where there is a deep and fertile soil it is usually given the preference over the mahaleb root.

Mazzard is used exclusively as a root stock for cherry and is less likely to gum and die-back than cherry on mahaleb.

STANDARD FRENCH PEAR—The standard French pear root is the standard stock for pear in California.

It will not only survive a larger amount of moisture and poor drainage than the others, but will endure much flooding as well.

Like any other root stock it does best in deep, fertile, well-drained soil, but unlike the other roots it will thrive in most any location.

The French pear root is subject to blight.

JAPANESE PEAR—The Japanese pear seedling is used extensively in Japan and China as well as in our own Northwestern states as a root on which to propagate the pear.

In past years the information concerning this root stock has been rather indefinite, but it has been under the observation and investigation of reliable horticulturists for many years who have thoroughly tested its desirability as a root stock and who have declared it a thrifty grower, non-susceptible to blight, and practically immune from attack of woolly aphids.

It requires almost the same location as the French pear, except that it will not endure quite as much moisture. It grows best in river bottoms or heavy loam soils that have good drainage.

We do not hesitate to recommend the Japanese pear as a root stock on which to propagate the pear, as we, ourselves, have propagated our pear successfully with this stock.



Drying Apricots

ALMONDS



Selected Strain of the Nonpareil Almonds

Almond growing is as reliable an investment as any in the state, and we encourage you to plant them if you have land suitable to their production. Nowhere in this country can almonds be more successfully produced than here in California, and we are now able to supply but one-fourth of the present demand. Does it not seem that we should develop this industry to the fullest extent when we have such an excellent place in which to do it and when seventy-five per cent of the nuts used in this country are imported from Italy, France, and Spain?

The industry of planting nut trees in California has progressed wonderfully in the past few years, but it has many possibilities yet untouched.

The Nonpareil, Drake's Seedlings, and Texas Prolific are some of the best producing varieties. In some localities the Ne Plus Ultra and I. X. L. do just as well when planted in combination with Nonpareil and Drake's Seedlings or Texas Prolific used as a pollinizer. Plant Drake's Seedlings or Texas Prolific with either of the other two varieties for cross fertilization. You will find that our clean, healthy stock of trees on bitter almond and peach roots will yield very profitable returns.

Cultivating the Almond

With the exception of the walnut the almond is more extensively grown in California than any other nut-producing tree. There are many sections throughout California free from late spring frosts that render them particularly adaptable to the growth of the almond. The Sacramento Valley is the largest producing almond section in the state, but the San Joaquin Valley and the Paso Robles district of San Luis Obispo County are rapidly coming into prominence.

The almond is best adapted to loose, light, warm, well-drained soils which permit the roots to penetrate deeply. The trees should be planted twenty-five feet apart and cut back to twenty inches from the ground.

The next winter after planting, the limbs of the trees should be thinned out as evenly as possible so that three or four are left to form the head of the tree, and cut them back about one foot. The second winter the new growth should be cut back to one foot, leaving a few of the inside branches in such a manner that they do not crowd the interior of the tree. The following winter thinning out the overlapping or

crowded branches will be all the pruning necessary. Continue this method of pruning year after year. One of the essential factors in the culture of the almond is cross pollination. Drake's Seedling and Texas Prolific are the best fertilizing varieties, and should be planted with such varieties as Nonpareil, I. X. L., and Ne Plus Ultra, alternating at least every fourth to sixth row with either Drake's Seedling or Texas Prolific.

To harvest the crop shake the trees and whip the nuts that do not fall with light poles, bamboo are the best, so that the bark on the limbs of the trees will not be injured. The nuts should be hulled immediately and spread on trays and exposed to the sun for a few days. Turn them over constantly so that they will be thoroughly dry before they are sacked or boxed. In order not to injure the flavor of the nut meat do not expose the nuts to sulphur fumes until they are dry. Before the nuts are sulphured they should be sprinkled with water so that the shell is slightly moist. The operation of sulphuring should continue for two or three hours. However, almonds can be readily disposed of without this bleaching process.

Almond trees are usually heavy, sturdy growers in the nursery row and they rarely exceed four feet in height.

ALMOND ON ALMOND AND PEACH

	$\frac{1}{2}$ in.	$\frac{3}{8}$ to $\frac{1}{4}$ to
	and up.	$\frac{1}{2}$ in. $\frac{3}{8}$ in.
1000 rate, 300 or more trees. ....	.....	.....
100 rate, 50 to 299 trees. ....	.....	.....
10 rate, 5 to 49 trees. ....	.....	.....
Single rate, 1 to 4 trees. ....	.....	.....

DRAKE SEEDLING—This variety is of the Languedoc class and was originated on the grounds of Mr. Drake, of Suisun, California. The tree is a strong grower and a heavy bearer; in fact it has the reputation of bearing regularly in sections where the Languedoc is a total failure. One reason for its heavy bearing is the fact that it is very late in blooming, consequently is more free from frost than any other variety.



The tree, while being a strong grower and very healthy, does not grow as large as some of the other varieties. A point making this variety very desirable is that it produces at an early age. The nut is of medium size and roundish in shape. The shell is medium soft and white, bearing a short plump kernel of good color. Doubles are often found in this variety, but this is more than offset by its good flavor and heavy bearing qualities.

The Drake's Seedling is recommended for planting in most all almond sections of California by the leading almond growers. Blooms first week in April.

I. X. L.—The I. X. L. is one of the Hatch varieties of the fine soft shell type of almonds.

This tree is a sturdy upright grower, producing large nuts which are very easily hulled. This shell is soft and smooth; the kernel is large and very plump.

One of the features which makes this variety



Harvesting Almonds



in demand is the fact that the shell possesses a fine color without bleaching. This variety always brings a high price in all markets and to our knowledge has never been lower in price than second in the entire list of almonds. The I. X. L. should be planted in connection with Texas Prolific or Nonpareil. It blooms middle of March. This variety a poor bearer.

NE PLUS ULTRA—This almond was introduced by Mr. A. T. Hatch, formerly of Suisun,



California, and is a regular and heavy bearer. The tree is a strong grower and inclined to have a drooping habit. It presents a very fine appearance on account of its large foliage.

The nut is long and narrow in shape and has a soft shell. The kernel is very large, sweet, and highly flavored. Hulls freely and is considered a favorite among almond growers for commercial purposes. Blooming period middle of March.

NONPAREIL—The Nonpareil has probably been more largely planted during recent years than any other. The tree is



a very strong grower, inclined to be of a weeping habit, and on account of its fine foliage presents a very beautiful appearance. It has the reputation among almond growers, in all sections

where grown, as being a heavy and regular bearer.

The nut is large, long, and narrow, having a thin shell and a good color. The kernel is long, fills the shell well and possesses an excellent flavor. It commands the highest prices on the market, selling from one to three cents higher than any other variety.

We highly recommend the Nonpareil for planting in all almond sections of California. Blooms last week in March.

TEXAS PROLIFIC—This is one of the popular varieties of almonds grown in this state. It was originated in Texas and brought to California about the year 1891, and bears the distinction of being about the only almond that would bear in that district.

The tree is equal to that of the Drake's Seedling for its heavy bearing qualities, but grows much larger. It is of an upright habit, having a smooth wood and a fine foliage. It is a late bloomer, consequently is almost sure to escape damage from late frosts. The nut is of medium size, having a soft shell which is white in color. The kernel is short, plump and very sweet.

APPLES

As there is a great deal of competition with the Western and Northwestern states, the fall and winter apple industry in California is not so extensive as it might be, although the market is gradually increasing, and there will soon be a demand large enough for all the apples these states can produce. However, we are fortunate inasmuch as the early summer and midsummer apples ripen before those of the Northwestern and Eastern states, leaving a market with very little competition. We rec-



Delicious Apples

ommend the Skinner Pippin as the best variety, but the Red Astrachan, White Astrachan, Alexander, and Gravenstein are all good varieties.

APPLES

	$\frac{1}{2}$ to $\frac{1}{16}$ in.	$\frac{3}{8}$ to $\frac{1}{2}$ in.	$\frac{1}{4}$ to $\frac{3}{8}$ in.
1000 rate, 300 or more trees.
100 rate, 50 to 299 trees.
10 rate, 5 to 49 trees.
Single rate, 1 to 4 trees.



Apple Trees Growing in the Nursery

ALEXANDER—The Alexander is one of the best of the Russian type varieties. The tree is a vigorous grower, hardy, and attains a medium to large size. While the natural growth of this tree is upright, it has a tendency to droop after bearing several crops. This variety is approved for planting in all districts of California, but is particularly recommended for the interior valleys and foothill regions.

The fruit is very large, regularly formed, with moderately thick and tough skin, handsomely striped with a lively red, showing faint red on the shaded side, but very bright in the sun and is one of the most attractive apples. The flesh is yellowish white, rather coarse in texture, but firm, tender, and juicy, medium to good in quality, and is highly recommended for culinary purposes. Ripens in September and keeps well until November.

BALDWIN—This is a very popular variety in the Northwest, where it is extensively grown, and is highly approved for planting in all sections of this state, but especially in the Northern and elevated districts.

The tree is large, very vigorous, and long lived. It does not reach bearing maturity as early as several other varieties, but when it does, it bears abundantly and is dependable. We would suggest thinning of the fruit, in order to overcome its natural habit of overproducing.

The fruit of this variety is large, roundish, and fairly uniform in size, having a tough, smooth skin, mottled with bright red. The flesh is yellowish, firm, juicy, subacid, and of good flavor. Ripens in January and keeps until April.

DELICIOUS—The fruit of this variety is all that its name implies. It is large and uniform in size and its shape is long and tapering, being uniquely ribbed and having distinct knobs at the blossom end of the fruit. The skin is thin and tough, yellow in color, marked with dark red, with a crimson cheek on the sunny side. The flesh is white, fine grained, crisp, juicy, melting, sweet, slightly acid, and has a very fragrant aroma.

The tree is a very vigorous grower of uniform habit and of medium size, and is valued for planting in the central coast regions, interior valleys, foothills and high altitudes; however, it does fairly well in all soils where other apples are grown. Ripens in November, and in cold storage will keep until March.

The Delicious is one of the finest varieties for dessert purposes. This, together with its extreme beauty, causes it to be a favorite on the market, where it always sells at fancy prices.

RED ASTRACHAN—The Red Astrachan is one of the oldest Russian type apples in the United States, being exhibited by the Massachusetts Horticultural Society as early as 1835, and enjoys the distinction of being one of the most widely used and grown throughout the continent.

The tree is of medium size, and of moderately vigorous growth, inclined to grow rather roundish and dense, consequently careful pruning is necessary in order to obtain best results. This variety is approved for planting in all sections of California, but is particularly adapted to the interior valleys, it being one of the few sorts which withstand the extreme heat and produce regular and abundant crops.

The fruit is of medium size, roundish and flat, sides somewhat unequal. The skin is rather thin, quite tender, smooth, of a yellow or greenish tinge, usually striped with deep crimson or carmine, and dotted with numerous whitish dots. The flesh is of a whitish tinge, sometimes bearing a small trace of red, rather fine, tender, crisp, and juicy, with a brisk subacid flavor.

We would recommend the planting of this apple as a commercial variety, wherever planters have access to good local markets, and also for culinary purposes, wherever the soil and climate is adapted to the growing of any other variety of apple. Its period of ripening makes it one of the most valuable of early apples for commercial purposes, and it is most highly esteemed by housewives in general. Ripens in July, and when placed in a dark cellar keeps until September.

RED JUNE—The Red June, originated in South Carolina, is another of the early summer varieties. Although it has the reputation of being a very good apple it has not been planted to any great extent commercially.

The tree is a moderate grower, of spreading habit and as it attains age it usually is a reliable bearer.

The fruit is rather small, roundish, and uniform, having a tender, smooth, glossy skin, of pale yellow or greenish, overspread with a deep red, sometimes very dark on the exposed cheek. Some specimens are entirely red with rather numerous dots, which are very small and light. The flesh is white, tender, juicy, and of a rich, subacid flavor.

It is particularly adapted to the interior valleys and foothill sections, although for home use, it is approved in most all localities. Used principally as a dessert fruit. Ripens in July.

RHODE ISLAND GREENING—This is one of the oldest and most widely known and highly

prized varieties of apples and certainly needs no introduction to anyone.

The tree is large and vigorous; makes a dense growth; is wide spreading and somewhat drooping. This tendency requires the tree to be headed somewhat higher than the average trees and requires careful pruning to secure the best results. This variety always repays for any trouble taken to have it right.

The fruit is large to very large and uniform both as to size and shape, with a fairly thick, tough, smooth skin of greenish color turning to yellow when fully ripe. The flesh is yellowish, firm but tender, juicy and rich and exceedingly good in quality.

This variety is good for all purposes and is recommended for all sections. If placed in storage as soon as picked it keeps remarkably well. Ripens in October.

ROME BEAUTY—The fruit averages above medium size, and is quite uniform both in size and shape, which is roundish to slightly oblong. The skin is thick, tough, and smooth, which makes it a very valuable apple for shipping and storage purposes. It is of a greenish yellow shade, mottled with bright red, sometimes almost solid red on the exposed cheek, often striped with a darker red and covered with numerous whitish or brown dots. The flesh is nearly white, with a slight tinge of yellow, moderately fine grained, very juicy and aromatic, with an agreeable mild subacid flavor.

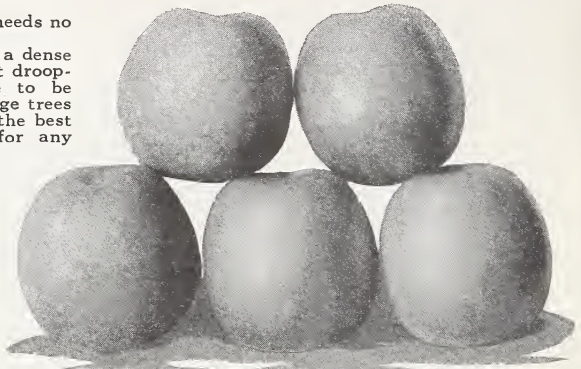
The Rome Beauty is particularly noted for its fine keeping quality, which renders it a very profitable apple, both as a commercial and family orchard variety. It ranks favorably with the well-known Baldwin for its dessert and culinary purposes, but comes into bearing at a much earlier age, which makes it a great favorite among planters. Ripens in November and under proper conditions can be kept until the latter part of March.

SKINNER'S PIPPIN—This variety originated in the Santa Clara Valley and is recommended to planters of California. The tree is a strong, vigorous grower and requires severe pruning, owing to its dense habit of growth.

The fruit is very large, of oblate conic shape, with a pale yellow skin, often blushed with a faint red on the sunny side, sometimes striped with red. Flesh is yellowish white, tender, juicy, and subacid, of excellent quality and flavor.

This variety is recommended for planting in the Central Coast and Southern California regions. Ripens in September.

STAYMAN WINESAP—The fruit is of medium to large size, quite uniform in shape and inclined to be somewhat flattened at the base. The skin



Newtown Pippin Apples

is rather smooth and thick, of a green color, becoming more yellowish when ripe and covered with a dull mixed red, sometimes faintly striped with dull carmine. The flesh is greenish yellow in color, of firm texture, very juicy, with a tart flavor. Ripens in December and can be kept until April.

WHITE WINTER PEARMAIN—The tree is a hardy and vigorous grower, with a spreading habit. It is a heavy producer, and its fruit is unexcelled as a market variety.

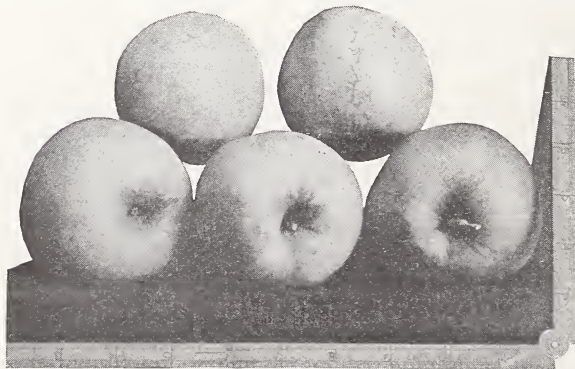
The fruit is medium to large in size, very uniform, and of a roundish-oblong shape. The skin is smooth, greenish at first, then gradually turning to a pale, waxy yellow, flushed on the sunny side with a brownish red and covered with numerous pale or russet dots. The flesh is of a yellow tinge, firm and fine grained, tender, crisp, juicy, with a pleasing aroma. Ripens the latter part of November and keeps well under ordinary conditions until January.

WHITE ASTRACHAN—Its early ripening qualities, combined with its value as a local shipper, has made ready sale for the fruit in San Francisco markets. The tree is of Russian origin, a moderate grower, inclined to spread with age.

The fruit is of large size, roundish, and flat at both ends, and is very attractive. The skin is a deep, waxy yellow color, showing faint streaks of red or pink. Flesh is white and quite acid, making it highly prized for culinary purposes. It reaches the markets when the cold storage apples are practically gone, and for this reason brings good returns. Ripens in early July.

WINTER BANANA—The tree of this variety grows to a medium size, forming a wide-spreading head, the limbs of which are inclined to droop, giving the tree the appearance of a weeping habit. It comes into bearing when young and produces regular and heavy crops. The fruit is of large size and in shape is roundish to conical and sometimes very flat at the base. The skin is smooth, tough, moderately thick, waxy, and of a yellow color which, when ripe, often has a blush of dark-pinkish red, sometimes covered with whitish or fine russet dots. The flesh is of a whitish color, tinged with a pale yellow; crisp, tender, mild, subacid, and a little coarse. Ripens in October and keeps well until Christmas.

YELLOW BELLFLOWER—The fruit is inclined to be rather large and oblong and more or less ribbed, often with prominent ridges at the apex, sides being sometimes unequal. The skin is of decidedly



Winter Pearmain Apples

attractive color, being shaded and often blushed with a brownish red in the sun which improves greatly by becoming a more clearly pale defined yellow as it matures in storage. The flesh is whitish, tinged with a pale yellow and moderately fine grained, rather tender, juicy, and possesses a fine aroma. When first picked it has a tendency to be rather too acid for dessert use, but its qualities greatly improve after several months of storage. Ripens in October and keeps well until January.

YELLOW NEWTOWN PIPPIN—This apple is excellent for storage and commercial purposes and for the export trade.

The fruit, while uniform in size, varies greatly in form, which is usually roundish, oblate, and somewhat angular. The skin is rather tough, slightly roughened with brownish russet dots and inclined to be of a greenish shade at harvesting time but afterwards attains a very pretty yellow, showing a slight trace of brownish pink near the base. The flesh is of a yellow tinge, tender, fine grained, and subacid.

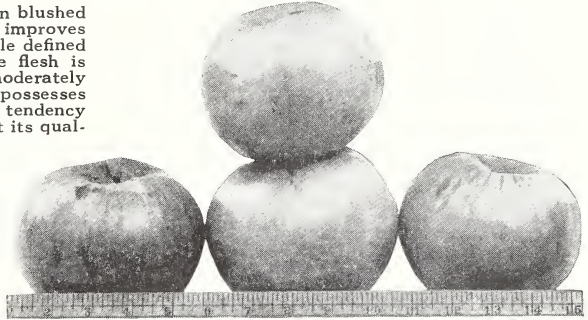
This apple is considered the best winter apple in California and is one which can be recommended as adapted for planting in all sections. Ripens in December and keeps well until the latter part of May.

CRAB APPLES

YELLOW TRANSPARENT—A new Russian variety imported in 1870. Tree an upright grower and a very early and abundant bearer. Fruit of good size; skin clear, white turning to a pale yellow. Ripens with Early Harvest.

HYSLOP—The fruit is of good size and is produced in clusters. The skin is of a rich dark red color. Flesh is of a subacid flavor and is particularly adapted for the making of cider as well as being a favorite with housewives for its use in making jellies, and spiced sweet pickles. Ripens in November and keeps well until January.

TRANSCENDENT—The Transcendent apple is rather large, flattened at the end, of a golden yellow color, with a rich red cheek, and covered



Winter Bananas

with a delicate pale blue bloom when ripe. This variety was imported from Russia and bears the reputation of being one of the best of the crab apple family.

YELLOW SIBERIAN—This tree is a vigorous upright grower becoming roundish with somewhat of a drooping habit.

The fruit is of a large size, beautiful golden yellow, or amber, in color and is borne in clusters. The flesh is a beautiful amber color, juicy, subacid and highly prized for the making of preserves and jellies.

On account of the high quality and the attractive appearance of this variety we believe every family orchard should contain one or more of these trees. Ripens in September.

RED SIBERIAN—This is a very highly prized variety of the crab apple family. Tree of rather spreading habit, producing fruit in clusters.

The fruit is about three-fourths to an inch in diameter, of uniform size and rather flat at the base. The skin is of a lively scarlet color and very smooth, having a yellow ground and usually covered with a white bloom. When the bloom is rubbed off it presents a very highly polished appearance, which makes it particularly prized for fruit basket decoration.

Red Siberian is considered excellent for culinary purposes and should not be overlooked when sending in your order. Ripens in September.



Apple Trees in Blossom

APRICOTS

One of the best money-makers in this state is the apricot for the reason that California and Palestine are the only locations where it is grown commercially. The demand for the dried and canned fruit abroad and for the green, dried, and canned fruit at home is far in excess of the output.

If your land will grow apricots we advise you to plant them as they will yield you an excellent profit. If you are interested write us and we will gladly discuss the matter of apricot growing and its possibilities with you.

Our stock of trees on apricot, peach, and myrobolan roots is unsurpassed. However, as the supply of good trees is limited and the prices are sure to advance before the selling season is well under way it would be a wise policy to order your trees now.

APRICOT ON APRICOT AND PEACH

	$\frac{1}{2}$ in.	$\frac{3}{8}$ to and up.	$\frac{1}{4}$ to $\frac{1}{2}$ in.	$\frac{3}{8}$ in.
1000 rate, 300 or more trees.....
100 rate, 50 to 299 trees.....
10 rate, 5 to 49 trees.....
Single rate, 1 to 4 trees.....

LOSSE BLENHEIM—We want to call your attention especially to the Losse Blenheim, a strain developed by Mr. H. E. Losse on his orchard near Mt. View, in Santa Clara County.

The Losse Blenheim has a very small pit and is an exceptionally vigorous grower as well as bearer. Every one who has investigated this apricot will plant it on account of its prolific bearing and size. It is a highly colored apricot, very firm, making a good canning and drying apricot. The Losse Blenheim is not an experiment, as we have been watching and developing it for eight years and have at last been able to put a large number of this variety on the market. There are now growing in our nursery one hundred thousand of the Losse Blenheim on all different roots, so they can be adapted to any kind of soil. This is an exceedingly large and well formed cot, running 4 and 5 to the pound. It is a heavy producer and a strong and thrifty grower.

California has the distinction of producing the largest quantity of apricots of any region in



Losse Blenheim

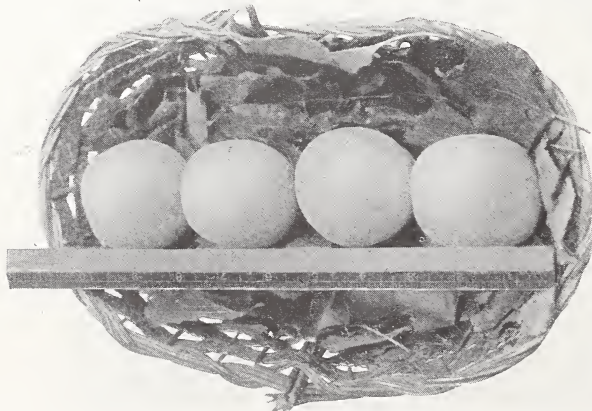
the world. Our exports to foreign countries, especially to Europe, has made California famous as an apricot-producing section. The crop is principally dried and canned, although large shipments of fresh fruit are made yearly to the Eastern markets with very satisfactory returns to the grower. The increasing demand for this fruit is causing orchardists to plant additional acreage and also to seek new locations where the apricot will produce regular and abundant crops.

Apricots are budded on apricot, myrobolan (plum) and peach roots and on this account are planted in a diversity of soils. The apricot root is best adapted to heavy loams which are well drained, the myrobolan root to the heavy subirrigated soils, and the peach root to the light silt and sandy locations. On account of their tendency to spread, the trees should be planted not less than 20 to 30 feet apart in regular orchard form. Locations must be secured which are practically free from danger of heavy late frosts, for the apricot, like the almond, is susceptible to damage.

Before planting, the land should be thoroughly plowed, cultivated and harrowed into a loose, friable condition. When the trees are set, cut them back to 18 inches from the top of the ground, shortening in the side or lateral branches to 2 inches. In pruning the first winter after planting, remove all branches from the tree to a height of 12 inches and leave from three to four main branches to form the head of the tree, and cut these back to 12 inches. These limbs should be distributed around the trunk of the tree so as to prevent crowding and overlapping as the tree develops. The second winter it should receive another heavy pruning, cutting out all new lateral growths, leaving only two laterals to each of the framework branches, and these should be cut back to not more than two feet. The third season two or three shoots should be allowed a start, and these should be shortened in one-half. In the future pruning of the tree the same system of the multiplication of branches can be carried out, but care must be taken not to allow the branches to overlap, as too many require severe and systematic pruning the first two years after planting to bring it into proper orchard form.

Apricots usually come into bearing the fourth year after planting, but it usually requires from seven to eight years to bring the tree into full bearing. This, however, is dependent upon the care, cultivation, and pruning given during the first four or five years after it is planted.

Dried apricots command fancy prices from year to year, and growers this season are receiving good prices for the dried



Losse Blenheim's Apricots, Averaging Four to the Pound

product in the sweat box. Practically all the varieties ripen their fruits in June, and the orchardist can harvest and dry his crop before other fruits are ready. In some localities the entire crop is used for canning purposes. This is particularly so in the Santa Clara Valley.

HEMSKIRKE—The Hemskirke apricot is of English origin, similar to the Moorpark in appearance, but the tree is a much better bearer.

The fruit is large and inclined to be rather flat on both sides. The skin is an orange color, presenting a red cheek when fully ripe. The flesh is a bright orange, tender and juicy, with a rich plum-like flavor.

The pruning of the Hemskirke apricot tree is in a large measure responsible for its production. Much better results are obtained when the trees are merely thinned out so as to admit air and sunshine. They should not be heavily pruned.

On account of its large size and fine quality it is highly appreciated in the local markets and by home orchardists. Ripens the latter part of June.

MOORPARK—Originated in England; is one of the largest apricots grown, and while it does not bear regularly in all sections it is a decided favorite with many people.

The tree is strong and thrifty and grows to an immense size. The fruit is very large, roundish in shape, often measuring two and a quarter inches in diameter.



Losse Blenheim Trees in the Nursery Row



Two-Year-Old Losse Blenheim

CHERRIES

At the present time California is far from producing the amount of cherries of which it is capable. Even though the sections suited to the growth of the cherry are restricted, the planters of this fruit have always found an exceedingly profitable market for their product. Now that we have such easy marketing conditions every planter in the cherry districts should be induced to plant more cherry trees.

The districts in this state best adapted to the growth of the cherry are the Vaca Valley, Santa Clara Valley, San Joaquin Valley, and the territory around Beaumont. The hot interior valleys do not make good cherry districts. The trees may attain an astonishing growth but they do not bear. The conditions most favorable to the cherry are deep, moist, loamy, well-drained soils where there is not an excess of moisture. In ordinary soils the trees should be planted twenty-five feet apart, and even further than that in very rich soils.

The trees should be pruned so as to form a low head. The leaves then serve as a protection to the bark from the sun. Tree protectors should be used until the tree can furnish its own shade. The tree should be headed back to eighteen inches when planted. The following season leave three or four branches to form the head of the tree, distributed so that there will be no forks, for the tree as it matures is inclined to split. Cut these framework branches back one-half the first winter, and the next season do not allow more than one or two branches to grow on those left the year before. Continue this method of pruning

until the trees have reached their fifth year. The only pruning necessary thereafter, is cutting off the overhanging branches. Cover any large wound made in pruning with paint.

When conditions are favorable the cherry will bear from the fourth to the sixth year after planting.

Everyone has eaten the Bing cherry and knows what a delicious fruit it is. Through the courtesy of our esteemed friend, Mr. Buckhardt, we were able to introduce the Bing in California, and it has proved to be the best shipping cherry.

We are now propagating the new Di Fiore strain of Royal Anne, which is generally acknowledged as the best Royal Anne strain introduced up to the present time. The Royal Anne buds are usually from two to three inches apart, but on this new strain large crops are possible because the fruit spurs are only from a half-inch to an inch apart. We know the trees from which we bud to be regular bearers for twenty years. The Di Fiore has another advantage over the other types of Royal Anne in that it bears earlier than the other strains and brings, therefore, the highest prices.

You will find a well cultivated cherry orchard to be a real profit-maker and that it will compare favorably with any other fruit orchard.

CHERRIES ON MAZZARD AND MAHALEB

	$\frac{1}{2}$ to $1\frac{1}{4}$ in.	$\frac{3}{8}$ to $\frac{1}{2}$ in.	$\frac{1}{4}$ to $\frac{3}{8}$ in.
1000 rate, 300 or more trees.
100 rate, 50 to 299 trees.
10 rate, 5 to 49 trees.
Single rate, 1 to 4 trees.



First-Class Cherry Trees in the Nursery Row

BING—The Bing cherry was originated by Seth Lewelling of Milwaukie, Oregon, and is one of the best black sweet cherries. The tree is a strong, vigorous grower of upright habit and has a very heavy foliage. The fruit is very large, heart shaped, and when fully ripe the skin is almost black. The flesh is firm, meaty, sweet, and delicious, and is of a purplish red color.

One great advantage in growing this variety is the fact that the fruit can practically all be harvested at one picking, it being very uniform in ripening. Its firmness and delicious flavor causes it to be in great favor among fruit growers as well as shippers.

The planting of this variety is highly recommended in the upper and central coast regions and interior valleys and foothills. Ripens middle of June.

BLACK TARTARIAN—The Black Tartarian cherry is a great favorite on account of its delicious flavor and productiveness. The tree is a vigorous, upright grower, has large heavy foliage, which gives ample protection to the fruit. The fruit is large, heart shaped, and the skin is black and glossy. The flesh is reddish purple in color, tender, with a small stone, and is of unsurpassed quality.

It is highly recommended for planting in all parts of the state except southern California and the hot interior valleys. Ripens the middle of June.

BURBANK—Originated by Luther Burbank and is the largest one of the best early cherries known. It is said by cherry growers to be unsurpassed for size, color, and quality by any other cherry grown. The fruit is a purplish black in color and very beautiful in appearance. Ripens in early May.

ROYAL ANNE—Commonly known as the Napoleon Biggareau and is the most extensively planted variety of all the sweet cherries. On account of its color and texture it is the favorite commercial canning and preserving variety from which the famous "Maraschino" cherry is manufactured. It is also considered the best variety for shipping to the Eastern markets.

The tree is a free, upright grower and an enormous producer. The fruit is pale yellow to amber color, overspread with a bright red. Is rather long and heart shaped. Flesh yellow, juicy, and possesses a mild, sweet flavor.

Is highly recommended for planting in all upper and central coast regions, interior valley and foothill sections. Ripens late June.

PEARS

The California pear has rapidly gained favor with the fruit growers during the last few years for canning, drying, and Eastern shipping purposes.

The pear adapts itself to most any soil, but it is particularly adapted to heavy, well-drained loam, and it does better in alkaline soils than any other of the deciduous fruits.

Many districts in California are especially suited for the growth of the pear. The best pear localities in this state are the Santa Clara and Sacramento valleys, the foothill regions of the Sierra Nevada



Di Fiore Strain of Royal Annes

Mountains, and the Palmdale and Tehachapi sections as well as many smaller districts. The Santa Clara Valley undoubtedly produces the best pear trees, for there is no pear blight in this section and consequently we have a tree that is in the best of condition. We grow our trees on the French and Japanese pear roots, the latter being extremely resistant to pear blight.

The king of the pear is without question the California Bartlett. Since it ripens before the Bartletts of other sections, it is a "money-getter," and some astonishing returns have been realized by growers of this fruit.

Other good varieties of later pears are the Beurre Rose, Beurre Hardy, Comice, Winter Nellis, Beurre d'Anjou, and Beurre Clairegeau. The fall varieties also net good profit.

Plant the standard tree twenty to twenty-five feet on the square, but plant those budded on the quince root from twelve to fifteen feet apart. When the tree is planted cut it back to eighteen inches from the ground and protect it by tree protectors. As the limbs tend to grow vertically, they must be pruned regularly and systematically in vase form. All shoots except three or four to form the head of the tree should be removed in the first winter's pruning. These should be cut back at least one-half. The following winter one-half of the new growth should be cut off leaving one or two spurs on the branches of the previous year. All new growth should be cut back one-third the third winter, and all branches removed which crowd the center of the tree.

The pear tree bears in the fourth or fifth year after planting, and when the tree has reached its sixth year a very profitable crop can be harvested.

How to Dry Pears

At the first signs of ripening the pears should be picked from the tree and laid away until they are thoroughly ripe. Then cut them in halves, remove the core, spread them on trays, and place on trucks. Run these trucks into a sulphur house and allow them to remain for twenty-four hours. Be sure to use enough sulphur to bleach the fruit thoroughly. Next spread the trays in the drying yard and leave them ten hours in the sun. The trays are then stacked so that there is plenty of ventilation and left until the fruit is dry enough to box.

PEAR ON JAPANESE, FRENCH PEAR, AND QUINCE

	$\frac{1}{2}$ to $\frac{3}{4}$ to	$\frac{1}{2}$ to $\frac{3}{4}$ to
	$\frac{1}{16}$ in.	$\frac{1}{2}$ in.
1000 rate, 300 or more trees.
100 rate, 50 to 299 trees.
10 rate, 5 to 49 trees.
Single rate, 1 to 4 trees.

BARTLETT—There has undoubtedly been more money made through the growing of Bartlett pears than from any other variety. Its name was derived from Mr. Enoch Bartlett of Dorchester, near Boston, who claims to have been the first man to cultivate this variety in the United States.

This sort can be grown in most all sections of the country, but is more largely grown in California than in any other. It is of particular value for its canning and drying qualities as well as for being a good shipper. The tree is a vigorous, erect grower, and a late bloomer, consequently can be depended upon to produce a crop.

Our strain of Bartlett is undoubtedly the strain to plant. It is what is known as the long neck Bartlett, which weighs heavy and there is not any waste in canning.

The fruit is of large size, skin bright yellow when ripe, inclined to blush on the sunny side, and is of oblong shape, tapering toward the

stem. The flesh is exceedingly fine grained, white and buttery, full of juice, and very highly perfumed. It is especially adapted to river bottom soils, but if properly cultivated will thrive in clay loams and even adobe. Ripens in August.

BEURRE BOSC—Beurre Bosc develops into a large handsome tree, is a vigorous grower, and a regular bearer. The fruit is large, pyriform in shape, tapering long and gradually toward the stem. It is always well spaced on the tree, giving one the impression it has been thinned. Skin smooth dark yellow in color, streaked and dotted with cinnamon russet, sometimes red on the sunny side. The flesh is white, very rich, melting, delicious, and highly perfumed. Always brings the highest market prices. Ripens gradually from the last of September to the last of October.

BEURRE CLAIRGEAU—As near as we are able to ascertain this pear was raised by Mr. Pierre Clairgeau of Nantes, France, and was imported into the United States many years ago. Owing to the beauty of the fruit, the early bearing and productiveness of the tree, it is regarded as one of the very best market varieties.

The fruit is very large, of a yellow color shaded with orange and crimson, often being covered with russet dots and sometimes sprinkled with russet; inclined to be large at the blossom end, gradually tapering to the stem. The sides, however, are usually unequal, flesh yellowish, juicy, somewhat granular, with a sugary vinous flavor. In addition to being highly recommended as a market variety, it is also very fine for canning and dessert uses. Ripens latter part of September.

BEURRE D'ANJOU—The tree of this variety is a good grower and a heavy cropper. The fruit is large, obtuse, pyriform in shape, having a short, thick stem and small calyx. The skin is a greenish color, partially covered with russet and often shaded with a dull crimson. The flesh is white in color, melting, juicy, of vinous flavor, and highly perfumed.

Does well in all sections of California. Ripens in September.

BEURRE HARDY—The Beurre Hardy pear is the favorite variety among nurserymen for budding or grafting on the quince root. It forms a perfect union and produces a tree that comes



One-Year-Old Pear Trees in the Nursery

into bearing early and produces large crops of fruit. When budded or grafted on the Standard French or Japanese pear stock it also makes a fine, upright tree that is vigorous and productive.

It bears large fruit of a greenish color covered with light russet, which is shaded with brownish red, and sprinkled with brown dots. The flesh is buttery, melting, juicy, and highly perfumed. This variety can be grown very successfully on the alluvial soils of the valley, and especially on river bottoms. The Beurre Hardy is considered a good commercial sort, and by all means a tree or two should be found in all family orchards. Ripens in September.

COMICE—Owing to the late blooming and the early bearing of this variety it is considered by many orchardists as the money maker among pears.

The tree is a vigorous grower and a regular bearer. The fruit is large and of roundish shape, tapering to the stem; the skin is a waxy yellow in color, covered with light crimson blush. The flesh is white, fine grained, smooth, juicy, and has a delightful aroma. Owing to the fine keeping and carrying qualities some experienced orchardists claim this variety equal to the much favored Bartlett. Ripens in October.

EASTER BEURRE—The Easter Beurre is an upright grower, very thrifty but requires a rich soil rather than a warm climate, in order to show best results.

The fruit is large, with a skin of yellowish green, sprinkled with many russet dots and often more or less covered with russet. The flesh is white, fine grained, melting and juicy, with a fine, rich, sweet flavor.

By packing this fruit away in boxes, in a dark room, it can be kept for a considerable length of time. It is considered a desirable winter variety both for shipping and home market. Ripens in October.

WINTER NELIS—Winter Nelis is held in very high esteem by experienced pear orchardists in general. It is without exception the finest winter variety yet produced.

The tree is a very hardy and a very heavy cropper. Fruit is of medium size and roundish appearance, yellow in color, covered with russet. The flesh is yellow, sweet, and fine grained. Unexcelled for quality when fully ripe. Owing to the fine keeping qualities of this pear it is unexcelled as a good shipper.

This pear is highly recommended as a winter variety for planting, especially in the central coast regions, interior valleys, and foothills; however, it is fairly productive in all other regions where any other variety of pear is found. Ripens in December.

QUINCES

Up to the present time there has not been a great demand for the quince, and it has been almost entirely confined to the small orchard. The market for them in California has not been sufficient to warrant a very extensive planting, but there are markets for this fruit in the Middle-Western, Southern, and Eastern states. Every home orchard should contain one or more of these trees as they are excellent for making preserves.

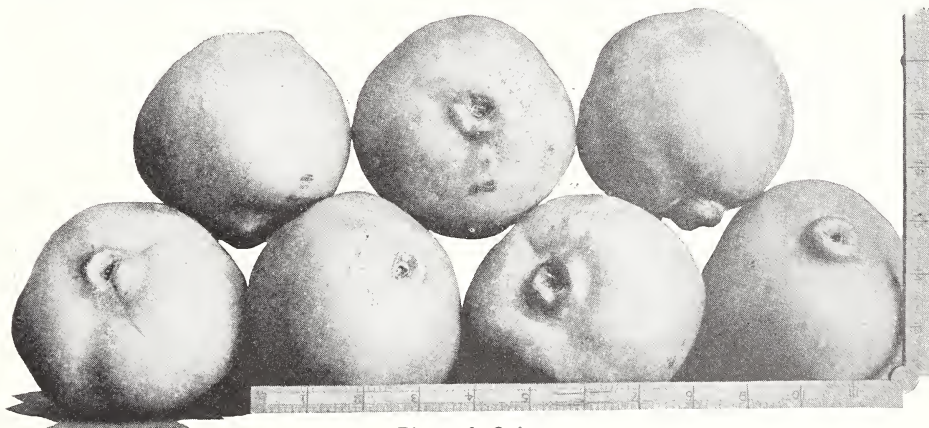
The quince grows best in heavy, irrigated, and well-drained soils. These trees grow just as well on the Coast as in the interior.

Cut the trees back eighteen inches from the top of the ground at planting. If you wish a tree form, the new growth should be cut back one-half the first winter, allowing the new shoots to form the head of the tree. If the trees are to be set in orchard form they should be planted sixteen feet apart.

All the varieties of the quince listed in this catalog are adapted to California conditions. The favorite variety is the apple or orange variety. Another good variety is the pineapple, which is a late introduction of exceedingly good quality.

How to Cultivate the Quince

The quince may be planted at most any distance, and can be grown either as a bush or tree. However, the best way is to plant them fourteen to sixteen feet apart, and prune so that they will assume the form of the low standard tree. Do this much in the same manner as other trees are pruned. Cutting about half of the new growth back every year while the tree is forming will strengthen the limbs and trunk, thus preventing the runners which are often broken off by the weight of the fruit and wind. Remove all the buds but



Pineapple Quince

one when the growth is starting so that there will be one good, strong branch instead of so many small shoots at a single point. Pinch off any shoots that start at undesirable points.

The bearing qualities of the quince can be greatly encouraged by June pruning. Thin out the number of shoots and stop the extension of those you retain by pinching the tips. By reducing the foliage (opening the center) and by removing some of the shoots and shortening others the overgrowth of wood is discouraged, allowing the tree to exert its forces on the few remaining shoots. Winter pruning will not do this inasmuch as it encourages the wood growth.

QUINCE

	$\frac{1}{2}$ to $\frac{3}{8}$ to $\frac{1}{4}$ to	$\frac{1}{16}$ in. $\frac{1}{2}$ in. $\frac{3}{8}$ in.
100 rate, 50 to 299 trees...
10 rate, 5 to 49 trees.....
Single rate, 1 to 4 trees....

APPLE or ORANGE—The former part of the name of this variety was given on account of its shape, which resembles very much that of the apple. The latter on account of its color, which resembles that of the orange. The tree is a strong grower, abundant bearer, and has a fine oval-shaped foliage, which is very attractive. This variety is probably more largely found in the home orchards and in local markets than any other.

The fruit is of a fine golden color when ripe, having a smooth skin. The flesh is golden yellow in color, fine and of excellent flavor, highly recommended for the making of preserves. Suitable for planting in all fruit sections of this state. Ripens in August and September.

CHAMPION—Known as the Champion among quinces on account of the exceptional size of the fruit. It has a fine yellow color, strongly russeted. The flesh is very tender and delicious and is often used in cooking with other fruit so as to impart its flavor.

The tree is a strong, handsome grower and a heavier producer than any other of its class. Champion does well in all sections of California. Ripens late in September.

PINEAPPLE—Originated by Luther Burbank of Santa Rosa, about the year 1899. The Pineapple quince was so named on account of its very high quality and unsurpassed pineapple flavor. The fruit resembles an apple in appearance and is smooth, globular, of a light golden yellow. The flesh is white and will cook tender in five to ten minutes.

This variety is considered the best of all, and is highly suited for planting in all parts of California, and should find a place in every home orchard. Ripens late in August.

THE NECTARINE

	$\frac{1}{2}$ in. $\frac{3}{8}$ to $\frac{1}{4}$ to and up. $\frac{1}{2}$ in. $\frac{3}{8}$ in.
1000 rate, 300 or more trees.
100 rate, 50 to 299 trees....
10 rate, 5 to 49 trees.....
Single rate, 1 to 4 trees....

ADVANCE—Large, round; skin green on shaded parts, blotched with red and brown on sunny side; flesh greenish white, rich and sugary, with rich flavor. The earliest nectarine. July.

GOWER—Ripens with Early Crawford peach. No fruit of its class has met with such favor as has this new early nectarine. We strongly recommend it for home and commercial planting. Fruit is very firm, freestone. Ships like a clingstone peach. Very early; delicious flavor. Strong grower, bears heavy. July.

NEW WHITE—(Large White.) Rather large; nearly round; skin white with a light tinge of red when exposed; flesh white; tender and very juicy, with a rich, vinous flavor. The most widely planted and popular variety in this state. August.

STANWICK—Originated in England from seed brought from Syria, and it is no exaggeration to say that it is the best nectarine in existence today. Very large, almost globular, often as large as a peach; skin pale, greenish-white, shaded into deep rich violet in the sun; flesh white, tender, juicy, rich, sugary, and delicious. Will average fully two and one-half inches in diameter. For drying and shipping not excelled by any other variety. August and September.

VICTORIA—Large, round and somewhat flat at the top; skin greenish yellow, crimson on side exposed to the sun; flesh firm, sweet, rich, and delicious. A valuable drying and shipping variety. August.



Prune Drying

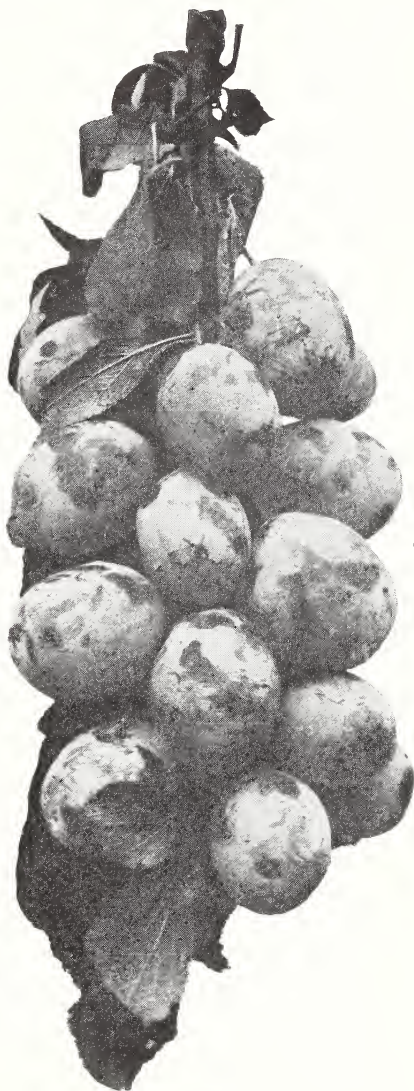
PRUNES

The greatest prune growing section in the world is right here in California, and our nurseries are situated in the very heart of it. For this reason we are able to render you the best possible service.

Prunes are one of the safest propositions in which to invest. There is always a staple market for them, and even under abnormal conditions there is enough profit to make their growth decidedly worthwhile. As there is always a large demand for prune



Branch From Our Strain of Imperial Prune



Improved French

trees, and as the demand tends to raise the price, we advise you to order your trees now. We have a wide selection of trees on myrobolan, peach, and almond roots to offer you.

On account of the many roots on which the prune may be grown it is adapted to various kinds of soils. The almond root thrives in dry, gravelly soils, the peach root in light, sandy silt and loamy soils, and the myrobolan root in heavy, wet soils, soils with poor drainage and in river bottoms where there is a standing high water level.

Plant the trees from twenty to twenty-



French Prune, Planted Two Years Ago Last Spring

five feet apart. Follow the same general rules for pruning as are used for the plum except that in some varieties of the prune intensive pruning is required. All new growth should be cut back to one-half and even two-thirds, and all the fruit spurs should be shortened in. In districts where there is a long growing season a long, stringy growth of wood which forms a long, barren bearing surface is likely to occur and should be overcome.

Should the grower not understand how to handle this condition we are always glad to be of any assistance to our patrons and friends in their pruning and orchard problems upon request.

Dried prune prices are fixed upon the quantity of fruit there is in a pound. Therefore, those varieties with the large, well-shaped prunes, high in sugar content, are the ones that demand the high prices.

PRUNE ON PEACH AND ALMOND AND MYROBOLAN

	$\frac{1}{2}$ to $\frac{1}{16}$ in.	$\frac{3}{8}$ to $\frac{1}{2}$ in.	$\frac{1}{4}$ to $\frac{3}{8}$ in.
1000 rate, 300 or more trees.
100 rate, 50 to 299 trees...
10 rate, 5 to 49 trees.....
Single rate, 1 to 4 trees....

FRENCH—The French prune enjoys the reputation of being more widely grown in California than any other prune.

The tree is a very vigorous grower, and bears abundantly in most all sections of the state. The fruit is of good size, egg shaped, has rather a thin neck and a deep violet color. The flesh is of good quality, sweet, and very sugary. It certainly has no equal as a drying prune.

We believe larger profits have been derived of late years from the French prune orchards than



Boys Picking Good-Sized French Prunes



This Photograph Shows the Growth of Our Prune Trees in a Single Year

from any other variety of fruits, and for this reason do not hesitate to highly recommend large commercial plantings of this variety.

HUNGARIAN—This prune originated in Belgium and has been referred to by some as Ponds Seedling. The tree is a very vigorous grower and a strong bearer.

The fruit is of large size, beautiful dark red color, and is very profitable for shipping purposes. In many cases it is cut and dried in the manner of apricots, and exposed before drying to the fumes of sulphur. The dried product has a bright red color and is sold commercially as "Ruby Plums." It is recommended for planting in most all sections of California. Ripens middle of August and September.

IMPERIAL—This prune is successfully grown in the northern interior valleys. It is highly recommended, especially on account of its large size and beautiful color. When properly packed, it presents an appearance in the prune market which cannot be equaled by any other variety.

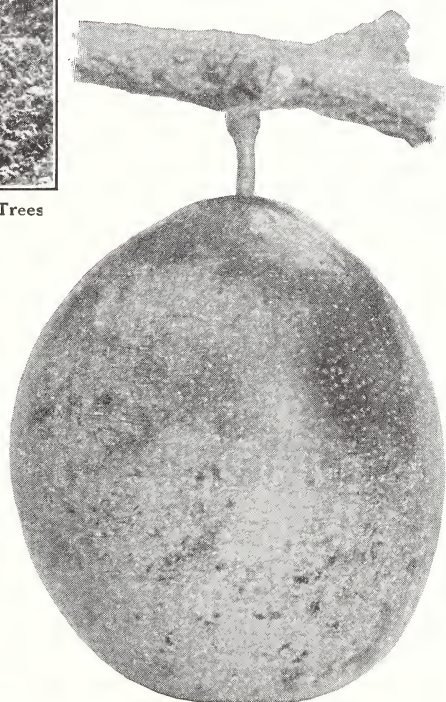
The tree is a strong, thrifty grower, and in sections mentioned is a heavy bearer. Fruit is large, uniform, and of a beautiful violet purple color, with a dark blue bloom. The flesh is of a greenish yellow, very sweet, and contains a small

pit. The fruit, when dried, is considered superior to all other varieties in size, flavor, and sweetness. Owing to the high quality of this fruit, we feel that we should particularly recommend it. Ripens in August and September.

SUGAR—This is another of the many creations of Mr. Burbank and has certainly been a source of revenue to many prune growers. The tree is a very strong and vigorous grower, and a heavy bearer. The skin is of a dark purple color and overspread with a white bloom. Flesh is yellow and very rich.

On account of the abundance of sugar content in this fruit and its early period of ripening we do not hesitate to say it is one of the very best for both shipping and drying purposes. It dries rapidly and weighs heavy. It is highly recommended for planting in the central coast and interior valleys and foothill sections. Ripens about the first of August.

TRAGEDY—The large and attractive appearance of this variety has won for it the distinction of being one of the best shippers in the state. Statistics show that in certain seasons it has been more largely shipped to Eastern markets than any other prune or plum in California. It is a beautiful dark purple in color, being elongated in shape, flesh is of a yellowish green, very rich and juicy. Its early ripening has also much to do with making it a favorite among prune and plum growers. While it is particularly adapted for shipping, it also makes a fair dried product.



Our Strain of Imperial Prune

The tree is an upright, strong grower, and is found in the central coast and interior valleys and foothill sections to be a heavy bearer, consequently is well recommended for planting in these sections.

We suggest to those who intend planting Tragedy prunes for commercial purposes that they plant one-fourth of the acreage with Climax plums, for the pollination purposes. This will act not only to increase the size of the fruit but cause the trees to produce larger crops. Ripens early in July.

IMPROVED FRENCH—After thirty years of careful selection and re-selection we have what we consider the best improved French prune on the market today. The strain of the prune is an upright, vigorous grower, hardy, prolific bearer, and runs to large sizes; dries well; sugar content excellent. This is surely the best commercial prune to plant, as it is surer of crops than other varieties of prunes. We believe this strain of French prune the right prune, as it is a winner for profits.

COX PRUNES

This indeed is a very wonderful prune. It is a sport of the French prune, originating on the Smith Ranch at Saratoga.

When the trees have been given proper care, they will average 30/40's and not over 50's.

It has this good quality over other prunes. It is of large size and easy to dry. It dries a beautiful golden yellow, clear to the pit. The tree is a very vigorous grower, similar to the French prune.

We recommend this above all large size prunes, as our investigations of the past six years to the so-called large prunes, are nothing more than discarded varieties of thirty years ago, being sold under a new name.

Be sure to investigate carefully before planting varieties of prunes; see that they have passed the inspection of the canners and packers (who are the actual purchasers of the dried products) in order to find out as to the desirability for the trade.



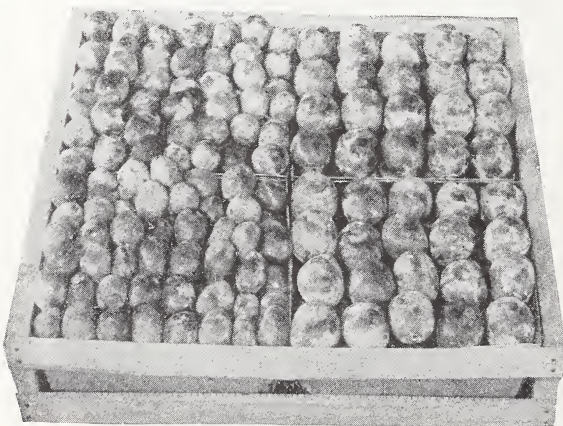
Cox Prune

PLUMS

The plum is a good commercial product and should appeal to the planter on account of its adaptability to different varieties of soil and the large crops that it produces.

We bud plums on myrobalan and peach roots. Plant the peach root in sandy and loam soils and the myrobalan root in heavy, moist soils.

The importance of soil preparation for planting plums cannot be too strongly stressed. Plow, cultivate, and harrow it well. If blasting has been used, irrigate the ground before planting to settle the earth. The tree should be cut back to eighteen inches from the ground when planted. Form the head of the trees in the first year's pruning, and cut back the framework branches one-half. The second season remove all laterals except two on each of the framework branches, and cut those that remain to one-half. After the fourth year continue thinning out the interfering branches.



Notice—Small Ones Are the Ordinary French; the Large Ones, Cox Prunes

It is advisable to plant more than one variety in a plum orchard for the purpose of cross pollination. However, do not allow the tree to overbear as this takes the strength from the tree.

The shipping plums have the greatest demand. To secure the best flavor the shipping plum should be left on the tree until it is ripe, but when shipping to Eastern markets it should be picked soon enough so that it will reach its destination in good condition.

PLUM ON PEACH

	$\frac{1}{2}$ to $\frac{3}{8}$ to $\frac{1}{4}$ to	
	$\frac{1}{16}$ in. $\frac{1}{2}$ in. % in.	
1000 rate, 300 or more trees.
100 rate, 50 to 299 trees.
10 rate, 5 to 49 trees.
Single rate, 1 to 4 trees.

BEAUTY—Originated by Luther Burbank of Santa Rosa, and is one, if not the best, of the early shipping plums.

It is of exceptional value for shipping to Eastern markets, as the fruit, when picked green, will color up and develop its delicious flavor later. Owing to its earliness, showy appearance, and size, which runs from two and one-quarter inches and up in diameter, it commands the highest prices in all markets.

The tree resembles the well-known "Formosa," is of upright habit and vigorous growth, a heavy producer, and has very dense foliage, which gives ample protection to the fruit.

The fruit is decidedly heart shaped and for this reason makes an easy and attractive pack. The skin being a beautiful crimson color, freely sprinkled with whitish dots, presents a fine appearance in the market. The flesh is amber in color, permeated with crimson.

We highly recommend the Beauty for planting in all valley and foothill sections of California. Ripens in June.

BURBANK—Another of the Japanese type of plums introduced by Luther Burbank of Santa Rosa and was named after him by Professor H. E. Van Deman. It is considered one of the best of the Japanese type.

The growth of the tree is somewhat different from any other plum, being of a spreading habit with a flat top. The fruit is large, bright red in color, and slightly mottled with yellow. Flesh is rich yellow, juicy, and very sweet. Ripens last of June.

CLIMAX—This variety was originated by Luther Burbank, and on account of its early ripening period and its good shipping and market qualities is one of the most profitable plums grown.

The tree is a strong grower, and owing to its early and heavy bearing qualities is inclined to droop. The fruit of the Climax is quite large, heart shaped, and very dark red in color. The flesh is yellow and of good flavor.

When planted in large acreage orchardists have experienced no trouble in disposing of the crops at good figures for shipment to Eastern markets. While it is particularly adapted to the interior valleys and foothill sections, it does very well in central coast valleys and in the southern part of the state. Ripens middle of June.

DIAMOND—The Diamond plum is of English origin and is considered a very valuable variety for shipping. Owing to its ripening period the fruit reaches the market at a time when other plums cannot be obtained, bringing the producer very satisfactory returns.

Tree is a strong grower and an immense bearer. The fruit is of large size, oval in shape,

having a skin of dark purple covered with a light blue bloom. Flesh is deep yellow, juicy, with a brisk acid flavor. Ripens in August.

DAMSON—This variety enjoys the distinction of being more widely planted and better known on the markets than any other plum. Its qualities for the making of preserves, jellies, pies, dumplings, etc., are unequaled by any other plum.

The tree is a strong grower and is exceedingly productive. The fruit is small, oval in shape, with a purple skin covered with a thick blue bloom. The flesh is tart and separates readily from the pit.

We particularly recommend this plum for home use and would suggest that in selecting trees for family orchards that one or two Damson plums be included. Ripens in September.

FORMOSA—A late creation of Luther Burbank of Santa Rosa, and a plum which we highly recommend and one that is rapidly coming into popularity with the leading fruit shippers.

The tree grows large, strong, and vigorous and has a dense light green foliage. The fruit is heart shaped, uniform in size, averaging in circumference six inches one way to seven and one-half the other way. The skin is of a light cherry-red color with a very pale bloom changing when fully ripe to a rich deep red. The flesh is of a delicate yellow, firm, juicy, and very delicious.

When placed on the market it presents a very attractive appearance due to its high color and shape. We especially recommend the planting of Formosa in the interior and coast valleys and foothill sections. Ripens in June.

GAVIOTA—This is one of the latest blooming varieties of "Burbank" introductions, which invariably assure the planter of a crop of fruit. Gaviota plums have been exported to foreign countries with success. It is undoubtedly one of the best shipping and keeping plums on the market.

The fruit is round, sometimes oblong, of a deep reddish-purple color. Flesh yellow and sweet to the pit, which is exceptionally small.

We recommend the planting of this variety in the coast and interior valleys and foothill sections. Its time of ripening is from July 15 to August 5.

GREEN GAGE—Green Gage is more widely known throughout the United States and European countries than any other plum on account of its popularity as a superb canning fruit.

The tree is of slow growth, short, and of rather dwarfish habit. It is, however, a regular and heavy bearer. The fruit is of medium size, of yellowish-green color, often dotted or marbled with red. The flesh is pale green, exceedingly juicy, melting, and decidedly free from the pit.

We particularly recommend this variety for commercial as well as for home planting. Ripens about the middle of August.

JEFFERSON—This variety was originated near Albany, New York, about the year 1825. It is known among canners and plum growers in general as one of the most desirable as well as one of the most beautiful plums grown. Its flavor is almost equal to that of the Green Gage. However, its large size and attractive appearance places it ahead of that variety as a canning and market sort.

The fruit is large, oval, slightly narrowed on one side. The skin is golden yellow with a beautiful red cheek covered with white bloom. The tree is a moderate grower and a good producer, and when loaded with ripe fruit presents an appearance which is seldom equaled by any other variety of plum. We especially recommend it for planting in the central coast and interior valleys, and also the foothill sections. Ripens July to September.

GRAND DUKE—The Grand Duke is classed as a leader among the late shipping plums.

The fruit is very large and attractive, having a dark skin, almost black, covered with a deep blue bloom. The flesh is firm, with a yellow tinge, and has a slight tendency to cling to the pit. Its time of ripening and also its attractive appearance make it a very valuable plum for shipment to the Eastern market, for at that time of the season there are very few plums, answering its description, to be found in the market.

We especially recommend planting it in the interior valleys, foothill sections, and in the central coast valleys. Time of ripening, August.

KELSEY JAPAN—The Kelsey plum is of Japanese origin, and has been extensively planted in California since 1870. Its size and good keeping qualities have made it a favorite among the late shipping varieties.

The tree has a vigorous upright growth and is a regular bearer. The fruit is very large, heart shaped; skin green, changing to a rich yellow when fully ripe. The flesh is yellow, very firm, and adheres slightly to the pit.

While it can be grown with success in the upper and central coast valleys, it is particularly adapted to interior valleys and foothill sections. Ripens July to September.

SANTA ROSA—Santa Rosa is one of the best of the late Burbank introductions, and owing to its large oval shape and beautiful purplish crimson color, it is an excellent plum for shipping purposes. It attracted great attention at the Lewis and Clark exposition and was awarded a gold medal.

The tree is of upright growth and a heavy bearer. The plum is large and uniform in size. Skin purplish crimson color with a yellow bloom. Flesh is yellow, streaked and mottled with red; juicy; and of rich flavor.

While this plum has not been planted extensively, it has steadily gained in favor during the last three years and bids fair to be one of the leading varieties for shipping purposes in California. It is recommended for planting in central coast, interior valleys, and foothill sections. Ripens June and July.

SATSUMA—The Satsuma, or Blood plum, as it is commonly called, is one of the Japanese varieties and is highly recommended among housewives in general for the making of jellies, preserves, etc. While we do not recommend a large planting of Satsuma plums we have known of cases where good profits have been secured from the sale of this variety by planters who were close to local markets. We believe that every family orchard should contain a Satsuma plum tree.

The fruit is large and almost round, and of a deep dark red color. Flesh is firm, blood red, juicy, and of a good flavor, with a very small pit. The tree is a strong grower and a heavy producer. It ripens July to September.

WASHINGTON—This is one of the Eastern varieties that has been extensively planted on the Pacific Coast with good results.

The tree is a strong grower and a very heavy bearer. The plums are very large, roundish in shape, being a yellow green in color, often bearing a pale red cheek. The flesh is very firm, sweet, rich, and luscious.

We do not hesitate to recommend the Washington for canning purposes. Ripens in August.

WICKSON—Was originated by Luther Burbank and classed by many growers and shippers as a popular shipping plum.

The fruit is symmetrical in form, and when ripe ranges from a deep cherry red to a rich scarlet. The flesh is of an amber tinge and quite juicy, with a very small pit, and is valuable for its long keeping qualities. The tree is a very vigorous, upright grower.

While this variety is particularly adapted and recommended for planting in the central coast, interior valleys and foothill sections, it can be planted most any place in California with good success. Ripens in August.

YELLOW EGG—Is often called the Egg Plum on account of its shape. It is very popular and highly regarded for its canning qualities. During the last two or three years, canners have been scouring the country for Yellow Egg plums, ready to contract with growers for crops at fancy prices.

Fruit is of large size, often measuring as much as six inches by its longest circumference. The skin is yellow, often bearing white dots, covered with a thin white bloom. Flesh yellow, rather acid, but becoming sweet when fully ripe, and has a tendency to cling to the pit.

Owing to its attractive appearance it is highly recommended as a canning plum and as a good market variety. Thrives well in all parts of California. Ripens July and August.

LOQUATS

The loquat is another tree that is especially adapted to California conditions. It is a beautiful, large-leaved evergreen, is a hardy grower, and forms a well-rounded head. Besides being an excellent ornamental tree the fine-budded varieties bear a delicious fruit. The fruit is about the size of a medium-sized plum, is oblong in shape, and bright yellow in color.

BUDDED LOQUATS

	Each.	Ten.
2 to 3 ft., Extra Selected. . . .	\$3.50	\$30.00

PREMIER—Is valuable for market purposes on account of its early ripening. The fruit is very large, of a salmon color, and somewhat oval in shape, possessing a very fine flavor.

This is one of the earliest fruits on the market, consequently bids fair to become one of the most popular in sections where it can be grown. Ripens in March and April.

ADVANCE—Advance is one of the best loquats. The fruit is of a yellow color, shaped a good deal like that of a pear, grows from two to three inches in length, often having from ten to twelve loquats in a cluster.

The fruit is very sweet when fully ripe and has a delicious subacid flavor. Highly recommended for the family orchard and for commercial purposes. Ripens during April and May.



Advance Loquats

PEACHES

Peach growing is the primary fruit industry of California. There is a large demand for it both at home and abroad, making it a very profitable investment. This fruit, like the apricot, is an early bearer. The Clingstone peach is paramount, for it far surpasses any other variety for canning purposes and is an easy grower and seller.

The Freestone peach is good for the family orchard, but it is a wise policy to plant those varieties which ripen before the Eastern and Southern peaches, thus avoiding competition and low prices. The Mayflower, Alexander, Triumph, Early Crawford, and Foster are all good varieties.

The trees are best adapted to sandy loam and white ash soils that are well drained. Hardpan land properly blasted also produces good peaches.

See that the land is well plowed and harrowed before planting. After the trees are planted cut them back to eighteen inches above the ground and shorten in all lateral branches to two buds. Cut away all branches up to twelve inches from the ground the first pruning season, leaving from three to five branches to form the head, and prune these back to twelve inches. Distribute the framework branches on the tree trunk so there will be no crowding or forks. Thin out the small lateral branches the second winter, leaving two or three cut back about one-half on each framework branch. This system should be observed year after year.

Peach trees are usually planted from twenty to twenty-four feet apart—twenty feet for light soils and twenty-two to twenty-four for heavier soils. The tree begins to bear in the fourth or fifth year.

The Foster, Elberta, Lovell, and Salway

are the best Freestones for canning; the Elberta, Muir, and Lovell are the best for drying.

Properly thinning the fruit is an important detail in the matter of peach growing. It should be thinned so that it will not be less than four to six inches apart.

Drying Peaches

The dried peach that is clean and well colored is the one that finds a ready market. For drying use those peaches that are well ripened, but do not use any that are in any way damaged as it only lessens the value of your product.

Great care should be used in cutting the fruit in a complete circle. If this is not done the fruit is torn and a very crude appearance is the result.

For sulphuring and drying place the fruit all face up on trays. The trays should have cleats high enough to avoid the fruit touching when stacked. Do not allow the trays to stand longer than necessary before putting them in the sulphur house. When the fruit is ready to be sulphured place a container of good sulphur in a hole, twelve to eighteen inches deep, in the ground at one end of the sulphur house and light it. Then close the house for a period of six to eight hours. The fruit should then be taken out and laid in the drying yard which should be smooth and free from dust. Allow the fruit to remain in the sun until about half dried before it is stacked. It should be left in the stacks until dry enough to box.

PEACH ON ALMOND AND PEACH

Canning, Drying, and Shipping

	$\frac{1}{2}$ in.	$\frac{3}{8}$ to $\frac{1}{4}$ to
	and up.	$\frac{1}{2}$ in. $\frac{3}{8}$ in.
1000 rate, 300 or more trees.	.....	.....
100 rate, 50 to 299 trees.	.....	.....
10 rate, 5 to 49 trees.	.....	.....
Single rate, 1 to 4 trees.	.....	.....

ALEXANDER—The Alexander peach has the reputation of being the best known, and most widely grown of the early fruit varieties. The fruit is medium to large in size and very uniform in shape. The skin is of a greenish white color, partly covered with a deep red; the flesh is white, juicy, and of good flavor. We highly recommend the planting of this variety to those who wish to supply their local markets, as well as to all who intend planting in family orchards. Ripens about June 10.

BRIGGS RED MAY—Discovered by John G. Briggs of Yuba City. The fruit is of a large size, greenish white in color, with a red cheek on the sunny side. The flesh is greenish white, juicy, and melting.

Briggs Red May is a profitable variety in the southern part of the state, where it has been more extensively planted than in any other. We do not hesitate to recommend it as an early variety in all sections of California which are adapted to the growing of peaches. Ripens middle of June.



Four-Year-Old Tuscan Cling Trees

EARLY CRAWFORD—This is one of the earliest and best freestones for canning, drying, or shipping. The fruit is large in size, having a skin of yellow color, tinged with red. The flesh is yellow, rich, and of good flavor. It was originated in New Jersey and is one of the most largely planted early freestone varieties in California. Ripens middle of July.

ELBERTA—The Elberta enjoys the distinction of being the best-known peach throughout the United States. There is probably no other variety grown that is to be found in as many markets and which extends over as long a shipping period.

The tree is one of the strongest and most vigorous growers. The fruit is very large, round, and of a golden yellow color, faintly striped with red. The flesh is yellow, juicy, and with a very high flavor. Ripens last of July.

FOSTER—This is another peach of Eastern origin, and is very well known throughout California. The tree is a very strong grower, and a fine producer, ripening about the same time as the Early Crawford and just before the Elberta.

The fruit is large and uniform in size, slightly flattened. The skin is a very deep orange in color, with a dark red cheek in the sun. Flesh is bright yellow in color, rich and juicy. It is highly recommended for its table uses and for its fine shipping and drying qualities.

Inasmuch as its ripening period is practically the same as that of the Early Crawford, we do not hesitate to say that it is much preferable, particularly as a dry product, the fruit showing

LATE CRAWFORD—This peach is widely known throughout the entire United States. In California it has been extensively planted and good profits have been derived from it. It is a good shipping peach, and equally good for drying. It enjoys the distinction of being one of the oldest varieties planted in this state. The fruit is large, roundish, having a yellow skin and a dark-red cheek. The flesh is deep yellow in color, inclined to be reddish at the pit. Ripens early in August.

LEVY LATE or HENRIETTA CLING—Originated by W. W. Levy, Washington, D. C., and has for several years been one of the leading late clingstones of that section. The tree is a strong grower and a heavy producer. The fruit is large in size and roundish in shape. The skin is a deep yellow, bearing a rich brownish shade on the sunny side. The flesh is a rich deep yellow, firm and juicy, ripening the middle of September.

LOVELL—Originated in California as a chance seedling and is one of the most widely planted and highly favored of any freestone variety in California today. The tree is a vigorous grower and a heavy producer. The fruit is uniform in size, almost perfectly round; yellow in color. The flesh is firm, fine, yellow to the pit, and contains a large percentage of sugar. The Lovell is the best canning, drying, and shipping freestone peach grown. There is scarcely a year passes that the producer could not dispose of his crop of Lovells in any one of the three ways mentioned at a profitable price.



Palero Cling Peach

up much brighter in color, consequently demanding better prices on the market. Its ripening period is the middle of July.

HALES EARLY—This peach is a large early freestone and originated in the state of Ohio. The skin is of a greenish color mottled with red when ripe. The flesh is white, melting, and rich. Hales Early is a fine variety for house use and is considered a good variety for local markets. One particularly good feature about this peach is the fact that it is very easily peeled. Ripens early in July.

We do not hesitate to state that we consider this variety one of the very best peaches to plant. Its time of ripening is the last part of August, or the first part of September, just as the Muirs are going out.

PALORA CLING—A seedling originated at Gridley some ten years ago. A fine, large, yellow cling; flesh clear yellow to the pit; pit small and round, without spike; flesh of firm texture; fine grained and of excellent quality. This peach is almost identical to the Hauss, but with this additional feature which gives it



Our Round Tuscan Peach—the Cannery's Delight

the preference—it is much firmer and will ship to distant canneries in better order than Hauss. For that reason Palora and Peaks Cling are, by canners, being given the preference over Hauss and Johnson for the intermission immediately following Tuscan. Very productive and of equal canning quality to the Philips.

MUIR—The Muir is the King or Queen, as it might be called, of all the freestone peaches for drying purposes in California. It was originated on the place of John Muir, near Silveyville, California, but was first propagated by Mr. G. W. Thissell of Winters, California. It is very large in size, and a perfect freestone, having a clear yellow flesh which certainly presents a most beautiful appearance when properly dried.

In addition to its attractive appearance it contains more sugar qualities than any other peach, which allows it to dry exceedingly heavy, making it a very profitable variety to the producer. We feel that this peach is so widely known and favored among California planters that it is needless for us to mention all of its good qualities. We believe that anyone who contemplates planting a peach orchard for drying purposes should certainly not overlook the Muir. The California Peach Growers' Association has demonstrated that this variety is the only one that can be "Process Peeled" successfully. Time of ripening, latter part of July.

MAYFLOWER—This is one of the earliest freestone varieties and is highly regarded by all lovers of peaches for dessert purposes. The tree is a strong grower, late bloomer, and consequently favored by those growing peaches for early market purposes. The fruit is of a light green color, nearly covered with red. Flesh is creamy white, fine grained, and delicious. This peach is approved for all sections of California, and every planter should have one or more of the Mayflower peach trees. Ripens early in May.

PHILIPS CLING—We were one of the first to propagate the Philips Cling in this section, and

still have the original trees purchased years ago. We propagate from these trees, and thus those who buy direct from us are assured of getting the genuine Philips in all its perfection. The trees you buy from us are but one generation removed from the original trees. The Philips enjoys the reputation of being the best peach for canning purposes, as it is of a very even size, practically the same color all through; has a very small pit, is exceedingly rich in flavor, and highly colored. It remains on the tree well, which gives ample time for harvesting and delivering. Its lateness of ripening also makes it a great favorite with the canners, as it prolongs their season, thus enabling them to put out a much larger pack.

The fruit has a beautiful yellow skin with a bright tinge of red on the sunny side. Flesh is very fine grained and of a lemon yellow color. The tree is a very vigorous grower and a heavy producer, and for this reason is a great favorite among orchardists. Ripens early in September.

SALWAY—The late ripening of this peach makes it a great favorite in California for dessert purposes, coming in at a time when practically all other freestones are gone. It is also a good variety for drying purposes, enjoying the distinction of losing less weight in drying than any other variety. We do not recommend the Salway as a drying peach, on account of its late ripening, the drying process often being hampered on account of early rains. We believe, however, this is one of the best varieties to plant for late shipment to Eastern as well as local markets. We have never known a time when late freestone peaches were not in demand for dessert purposes.

The skin is of a yellow color, having a brown or red cheek. The flesh is yellow and inclined to be red at the pit. While it is not very juicy it possesses a very pleasing flavor. Ripens middle of September.

SIMS CLING—A fine large yellow clingstone originated near Selma and answering the same description as Libbee. Can be rated, however, just a few days later, ripening though during the intermission immediately preceding Philips. Of equal commercial quality and desirability to Philips. August 15 to 25.

TUSCAN CLING—This is a strain that can be purchased only from us. It is the result of eighteen years of selection and re-selection. We call your attention to the following special features: (1) Round and symmetrical in form; (2) uniform in size; (3) highly colored meat; (4) brings the highest prices; (5) superior quality for canning; (6) good bearer.

Our highly colored Tuscan Cling is a peach of known merit—the kind it pays to plant. If you want something fine, include at least some of this strain in your first order.

STRAWBERRY—To those desiring a good early white peach we recommend the Strawberry. The skin is of a creamy white color, partly covered with a dark red. Flesh is very white, with a tendency to be quite red near the pit; juicy and possesses a rich flavor. We recommend the planting of this variety in all home orchards. Ripens early July.

J. H. HALE—Originated by J. H. Hale of Georgia, and is heralded throughout that section as one of the greatest peaches ever discovered. The tree is a very strong and vigorous grower, having much the appearance of the Elberta. The



Walton Cling, King of Them All

fruit is of a deep golden yellow color, overspread with bright red; has a smooth thick skin and compares very favorably with the Elberta in shape. The flesh is firm, fine grained, and deep yellow in color. It enjoys the distinction of being a much better shipper, throughout the East, than any other freestone. Has not been planted extensively on this Coast, but having many good qualities we feel safe in commending it. Ripens last of July.

WALTON CLING—The Walton Cling originated in Yuba City. It is a fine large yellow cling. Flesh clear, of fine texture, and of excellent quality. Pit, small and round. This peach ripens just following the Palero Cling, but has this additional feature, it does not drop before ripening, and the peaches are all on the main branches and not on the ends of the short twigs. It is very productive, canning quality excellent. It can be shipped a long distance, as it stays very firm to the last. This is the peach to plant, as it fills the space between midsummer and the late peaches.

PERSIMMONS

The persimmon is now being planted quite extensively for its ornamental qualities as well as for its fruit, and for the important fact that it has a ready market in the East. The Japanese varieties are used for commercial purposes in California.

The fruit is of various sizes and shapes. Some are tomato-like in form while others assume the shape of round or elongated globes. Those varieties with dark meat are eaten when hard, but the yellow-meated varieties must not be eaten until quite soft or first having undergone the process of inoculation with alcohol.

The persimmon should be planted in light, loose, loam soil which must be well drained and capable of retaining moisture.

The trees should be set twenty-five feet apart in the orchard. The tree is cut back to eighteen inches above the ground at planting, and a fourteen-inch protector is used to protect the body of the tree from the sun. The head is formed in the first season's pruning. Three or four branches properly distributed around the tree are left for the framework. These are cut back one-half. The following winter one upright limb is left on each of the framework branches and is cut back one-half. The future pruning is devoted to shaping the tree and removing any overlapping branches.

For shipping, the fruit is picked quite hard, individually wrapped, and packed in crates or boxes. When it reaches the Eastern market it is ready for the consumer.

PERSIMMONS

	4 to 5 ft.	3 to 4 ft.	2 to 3 ft.
100 rate, 50 to 299 trees...	\$1.50	\$1.25	\$1.00
10 rate, 5 to 49 trees.....	1.60	1.35	1.10
Single rate, 1 to 4 trees...	1.75	1.50	1.25

HACHIYA—This tree is a very vigorous grower, of upright habit and very shapely. The fruit is pronounced by growers of persimmons as the largest and finest specimen of all persimmons, often attaining a length of three and one-half inches and a diameter of three and three-quarter inches, and of extremely high quality.

It is oblong shape, has rather a short point, and a skin of bright dark red, covered with dark blotches. Owing to its size and showy appearance it certainly is worthy of extensive planting. On account of its beauty and early ripening it is one of the very best for early market use, and fruit basket decoration. Ripens October.

HYAKUME—The fruit of the Hyakume can be used for eating purposes while still hard, while most other varieties are found to lack flavor and are rather astringent before fully ripe, this, of course, tends to make it one of the very best for shipping and market purposes.

The skin is of a light buff color, having rings and veins clearly showing at the apex. The flesh is of a dark brown color, very meaty, crisp, and sweet. Owing to its early ripening period and beautiful appearance, we strongly recommend planting it in a commercial way, as well as in every family orchard. Ripens early in October.

MAMMOTH GOSIO—The Mammoth Gosio persimmon is an upright grower and very productive. The fruit is large, round, and inclined to be somewhat flattened. The flesh is of a red color and very delicious. While it is not so extensively planted as some others, it is very profitable for market purposes. Ripens September.

TANE NASHI—Tane Nashi is a strong, vigorous grower, and a very prolific bearer. Owing to the large size of the fruit and the fact of its seldom containing any seeds it is a favorite among home orchard planters.

The skin is of a light yellow color, changing to bright red when fully ripe. Owing to its early ripening it is a leader for market purposes, and is also highly recommended for drying. Fruit ripens middle of September.

WALNUTS

In California the walnut is grown more than any other nut fruit. Rather than plant the inferior varieties planters are willing to pay the additional cost for the fine, thin-shelled varieties.

The walnut is best adapted to deep, rich loam soils. It can be successfully planted in hardpan soils, but the ground must be properly blasted to a depth of three feet and all the holes filled with good, loose subsoil.

Walnut trees can be set either in orchard form or along avenues at a distance of forty feet apart. It is always better to plant more than one variety so that cross pollination may take place.

Possibly less pruning is required for the walnut than any other tree. When it is planted it should be cut back to three feet from the ground. All the pruning necessary after the head is formed is to remove and shorten any overhanging and interfering branches that tend to make the tree one-sided or mar its appearance.

WALNUTS

Grafted on California Black

	100 rate, 50 to 299 trees.	Single rate, 1 to 4 trees.
8 to 10 ft.....
6 to 8 ft.....
4 to 6 ft.....
3 to 4 ft.....

EUREKA—Is declared by walnut growers to be one of the most reliable producers. It is about ten days later in blooming than other varieties. The tree is a strong, upright grower, and a heavy producer. The nuts are of large size, soft shell, smooth in appearance, and highly valued for commercial purposes. The kernel is of good color, plump, and very rich in flavor. In the southern sections of California,



Eureka

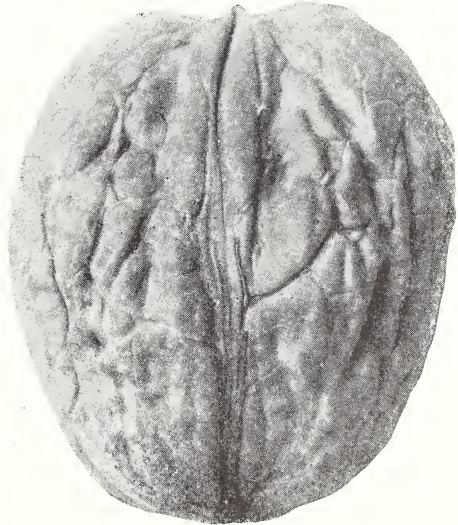
where walnuts are extensively planted, the Eureka is considered as being one of the very best.

FRANQUETTE—Originated in France, and is more widely known and planted throughout the different walnut sections of California, Oregon, and Washington than any other variety. The tree is a strong grower and a very prolific bearer. The nuts are of a large size, long, and smooth. The shell is of medium thickness, bearing a full, sweet, and very rich kernel, of high flavor.



Vrooman Franquette

WILSON WONDER—This variety is exceedingly large, with a smooth shell. The kernel is good, but not always full. Tree is exceedingly precocious and valuable for planting in the home garden or grounds.



Wilson Wonder



Wiltz Mayette

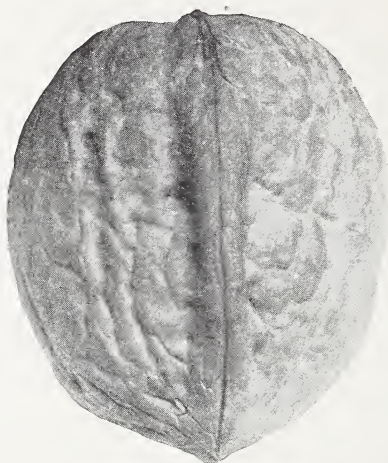
MAYETTE—The Mayette is of French origin and is one of the leading varieties, having many of the good qualities to be found in the Franquette. The tree blooms late in the spring and is a very heavy bearer. The nuts are large, uniform, and inclined to be flattened at the base. The shell is of a light color, soft, and contains a plump kernel of very fine flavor. While not as extensively planted as the Franquette, we believe the Mayette is almost equal to that variety. The nuts always command the highest market price. For pollination purposes, it is advisable to plant it with Franquette, as both trees will then bear more abundantly than if planted alone.

CONCORD—This popular variety originated from a seedling planted years ago by the father of Mr. George Westcott, in Walnut Creek, Contra Costa County. The fact that the tree has been a strong grower, enormous bearer, producing large, smooth, round nuts, well filled, has placed it in the front rank as the sort to plant by all walnut growers in this district. It is certainly worthy of trial in other sections of the state.

PAYNE SEEDLING—This, the walnut of walnuts, comes in bearing almost immediately. This nut originated on the George Payne ranch. It is the best bearer of all the different varieties. The description is similar to the Franquette. This variety must be kept heavily pruned or it will overbear and the tree will become stunted.

This walnut is one of the finest walnuts of today. Begins to bear large, well-filled nuts the first year after planting. When three years old, bears in abundance. Heavy, early bearer. Two crops of nuts, as it has two sets of blossoms. If the first is killed by frost, the second crop is safe. Has soft shell, kernel very meaty and rich in flavor. Proven to be one of the best. Our stock is all well-established and grafted trees.

Description of the Payne Seedling walnut as given by Mr. George C. Payne, the originator: "In 1897 I noticed on my ranch at Campbell a young seedling walnut tree, which for its age, was producing what I thought to be an unusually heavy crop of beautiful large walnuts. This



Payne Seedling Walnut

seedling had more the appearance of the French type of Persian walnut, possibly a seedling from one of them. Since the discovery of the seedling I have materially improved it by bud selection, and the 'Payne Seedling Walnut' is the outcome of the work. This walnut bears three years



Five Months' Growth of Payne Seedling Walnuts in the Nursery

sooner than any other type of walnut of the commercial varieties. The bloom is intermediate. The Payne Seedling is thoroughly tested. It is being planted extensively in large tracts in those sections of the state where walnuts are grown commercially. Its future is now a sure success. In size it is equally as large as the Franquette, and in shape somewhat similar. The shell is smooth, medium in thickness. The kernel is full, sweet, and very rich.

CALIFORNIA BLACK—The California Black walnut resembles the American Black. The tree grows large, having much the same habits as the American Black, but produces nuts of smaller size.

On account of the large quantities of soft shell walnuts grown in California the California Black nut is little used for dessert purpose. It is, however, a decided favorite with California nurserymen for propagating purposes.

CHESTNUTS

The Italian or Spanish and Japanese chestnuts have until late years been the principal varieties planted in this state. Recently, however, the French varieties, Marron Combale and Marron de Lyon and other varieties used in the East have been introduced here, and there is no doubt but that they produce a much finer grade of nut than the Italian or Spanish chestnut.

The coast counties of California are especially suitable for the growth of the chestnut. It is adapted both to heavy clay soils and deep loam or sand sufficiently moist. It is useful for its nut bearing as well as for its ornamental qualities and is extensively used for avenue planting. Plant the trees fifty feet apart, and in light, gravelly soils fifty feet each way. Cut the trees back to three feet at planting, allowing three to four branches to form the head of the tree. Thereafter thinning out the overhanging branches and keeping the center of the head open will be all the pruning required. Under favorable conditions the trees will bear in the fourth year.

CHESTNUT SEEDLINGS

	6 to	4 to
	8 ft.	6 ft.
100 rate, 50 to 299 trees.....	\$1.50	\$1.25
10 rate, 5 to 49 trees.....	1.75	1.50
Single rate, 1 to 4 trees.....	2.00	1.75

MARRON COMBALE—Planted quite extensively in California, with very satisfactory results. It is of French origin and quite superior to many of the other varieties of chestnuts. The nut is large, sweet, and possesses a fine flavor. The foliage is glossy and presents a pleasing appearance as well as being a vigorous grower and productive.

MARRON de LYON—This is another one of French origin and is claimed by growers of chestnuts to be valuable. The nuts are roundish in shape and very large. The tree is a vigorous grower and is much prized for its ornamental appearance.

POMEGRANATES

This fruit may be grown either as a shrub or tree, the former being the most commonly used. The tree with its brilliant, scarlet flowers and bright red and yellow fruits makes a very charming picture, and for this reason it is planted in gardens, lawns, hedges, or orchards. The trees thrive in rich, moist soils and also in strongly alkaline soils. They should be set fifteen feet apart in orchards. The fruit, besides being eaten fresh, is used for making jellies and acid drinks, and because of its keeping qualities and its attractive coloring it is used as table or sideboard decorations.

WONDERFUL—There is probably no other profitable fruit that enjoys the distinction of being so widely planted in California for ornamental purposes as the pomegranate.

Most of the fruit is shipped East, where it finds a strong and ready market. The fruit is of yellow color, overspread with red, and often blushed with deep scarlet. The pulp is a rich garnet color, with an abundance of juice, of a dark color and a very pleasing flavor, slightly subacid. Ripens in October.

GRAPES

California is universally known to be the greatest grape producing state in the United States and it possesses the largest acreage of raisin grapes in the world. Table grapes, raisin grapes, and wine grapes are all grown in large quantities here.

The usual planting distance for grapes is 8x10 feet apart which requires 544 vines to the acre. The distance for vines that are to be staked and trellised is 6x12 feet apart which requires 605 vines to the acre. When this distance is used the vines are staked the second and third years, heavy posts being set at the ends of the rows and two wires are stretched along the row and fastened at each stake. When wires are stretched cross cultivation is no longer necessary, but the center of the rows must be hoed out.

The Muscat is cut back to twelve inches above the ground. The head of the vine is formed from this and later the spurs for the future canes of the vines are grown.

Prune the Malaga to a height of two feet and distribute the spurs. Tie the upright cane to a four-foot stake. The cane will in time become strong enough to support itself and the stake can be removed.

Prune the Emperor, Cornichon, Flame Tokay, Thompson Seedless, Sultana, and other varieties of long cane table and wine grapes to a height of thirty-six inches.

Raisin Varieties

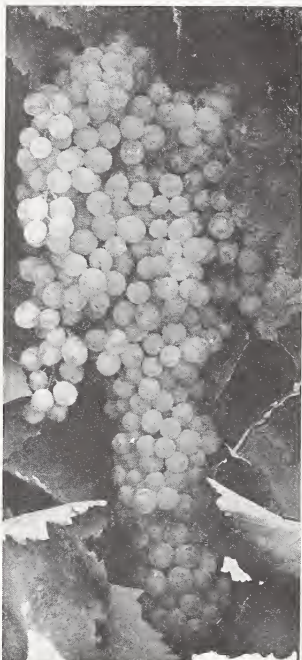
SULTANA—One of the strongest features in favor of the Sultana is the fact that it is much favored by bakeries, confectioners, and housewives on account of its tart flavor. The bunches

are large and compact, round, and greenish in color but should be left until quite yellow before picking for drying. Ripens in August.

ISABELLA—The vine is a strong grower and can nearly always be depended on to produce a good crop. The bunches are large and long in shape. Berries are rather oval in shape, black in color and have a very pleasant musky flavor. Ripens in September.

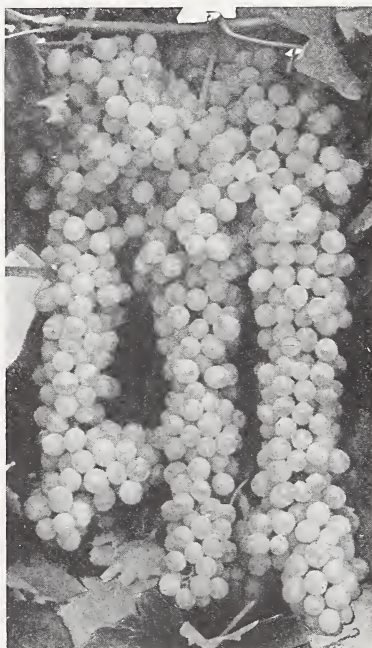
CONCORD—The Concord grape is particularly adapted for the making of grape juice. It is large and round and of a glossy black color, covered with a blue bloom. Ripens in August.

THOMPSON SEEDLESS—Bunches very large and compact; berries greenish yellow; firm, oval, and seedless; pulp crisp and of very sweet, delicious natural flavor; a good shipper and the best early variety. More valuable for drying than any other variety, and on account of its productiveness, its early ripening and freedom from rain damage while being cured, and the great demand for a seedless raisin of higher quality at remunerative prices, this is one of the best money makers for the California grower, and their consumption is capable of very large expansion. Ripens August 5 to 20.



Muscats

MUSCAT—The Muscat is the oldest, best, and most widely known of all the raisin grapes. On account of its thin skin, however, it is not classed as a good shipping grape. It is one of the best table grapes for local market. Ripens in September.



Thompson Seedless

PIERCE—The foliage is of exceptional size and presents a fine solid appearance. The vine is a strong grower and a heavy producer, its bunches and berries being of exceptional size, flavor, and of a glossy black when fully ripe. Ripens late September.



Pierce Isabella

Table Varieties

GRAPES—TABLE VARIETIES

	No. 1.	No. 2.
1000 rate, 300 or more vines.....
100 rate, 50 to 299 vines.....
10 rate, 5 to 49 vines.....
Single rate, 1 to 4 vines.....

EMPEROR—For table and other decorating purposes, as well as for eating, it is considered superior to any other variety of its ripening period. The vine is a strong grower and a heavy producer, bunches are large and long in shape. Berries are large, thick skinned, oblong, and a deep rose to purple in color, covered with a light bloom; in fact, every feature of this grape strengthens its shipping qualities. Ripens in October.

BLACK CORNICHON—The vine is a strong grower and in sections, to which it is adapted, is a good producer. The berries are of a very dark purple color when ripe, of a long olive shape, covered with a fine bloom. The flesh is firm and of good flavor, consequently is a ready seller when placed on the market. Ripens in October.

FLAME TOKAY—The Flame Tokay vine is a strong grower and possesses a beautiful foliage of a dark green color tinged with brown. The bunches are large, often weighing eight and nine pounds. Berries are large, oblong, being of a red color covered with a lilac colored bloom. Flesh is firm and of fine flavor. Ripens in September.

MALAGA—It is the best white shipping grape grown throughout the grape districts. Aside from its shipping qualities it is often used for making of raisin, both loose and layers, and while it does not have the flavor of the other raisin grapes it is of fairly good quality.

The vine is a strong grower, has plenty of foliage to protect the grapes from sunburn, and is long lived. The bunches are large, often weighing as much as ten pounds. The berries are large, oval in shape, having a yellowish-green

skin which is quite thick. The flesh is firm and of excellent quality. Ripens in August.

BLACK MOROCCO—A beautiful black-colored grape when fully ripe and is highly recommended for shipping purposes on account of its fine appearance, good keeping qualities, and lateness of ripening. The bunches are of medium size, rather closely set with large oval-shaped berries of black color. The flesh is firm, juicy, and of excellent flavor. Ripens last of October.

ROSE OF PERU—The Rose of Peru is known also as the Black Prince. The vine is a strong grower, producing large shouldered bunches. The berries are large, round, and black, with a firm and crackling flesh of fine quality. It is not adapted for a long-distance shipping grape but is highly suited for the home collection. Ripens about October 1.

Wine Varieties

GRAPES—WINE VARIETIES

	No. 1.	No. 2.
1000 rate, 300 or more vines.....
100 rate, 50 to 299 vines.....
10 rate, 5 to 49 vines.....
Single rate, 1 to 4 vines.....

ARAMON—Rather large for a wine grape; deep bluish black; skin thin; a favorite wine variety in Southern France. September.

BURGER—A German variety; bears immense crops and produces an excellent light white wine. Succeeds well on light soil. September.

CARIGNAN—Bunches similar to Mataro; berries oblong, black; produces heavy crops and a highly colored, good wine. September.

FEHER ZAGOS—Vigorous, hardy, and productive; bunches large and compact; berries oval, yellowish green; flavor very fine; valuable sherry grape. August.

FRANKEN RIESLING—The most popular white wine grape; bunches medium, very compact; berry round, yellowish green; very sweet and spicy. September.



This Grape Arbor Shows What Can Be Done With Grapes

GRENACHE—A strong-growing variety; bunches conical, rather loose; berries bluish black; makes excellent wine, but requires age. September.

MISSION (CALIFORNIA)—The well-known variety cultivated at the missions by the Spanish Padres; strong, sturdy grower, bearing large, black berries; valuable for wine. September.

PETITE SYRAH—One of the best claret grapes; very vigorous grower and remarkably productive. Cluster loose, long and shouldered; berries of medium size, black, covered with bloom. September.



Zinfandel

ZINFANDEL—The vine is strong, healthy and vigorous, producing good crops. The bunches are large and compact; berries round in shape and dark purple in color. Ripens in October.

RUPESTRIS ST. GEORGE—This variety is also known variously as Rupestris du Lot, Rupestris Richter, Sijas, Lacastelle, Monticola X Rupestris, Rupestris Phenomene, and is probably a hybrid between Monticola and Riparia. It is one of the most popular varieties grown in France and California, and is almost unsurpassed in its many good qualities. Growth erect and strong with heavy wood. It succeeds in a greater variety of soils than any other resistant stock. It thrives well in light, dry, and gravelly soils, its roots descending deeply in search of moisture. Does well also in soils charged with a heavy percentage of lime.

ASPARAGUS

CONOVER'S COLOSSAL—While there are many varieties of asparagus planted and grown, this is regarded by growers and shippers in general to be much superior to any of the older sorts.

It is of large size, tender, and of fine quality. Aside from being valuable for market and shipping purposes, we highly recommend it for home use.

We believe every home, where sufficient ground can be found, should have an asparagus bed, as this is one of the most delicate and delicious vegetables, when properly grown and picked, that is to be had.

PALMETTO—This is recognized among asparagus growers as a leader. It is of large size, very tender, and a regular grower. On account of its earliness it is highly valued for market purposes.

Palmetto is considered a great favorite in the family garden, coming as it does at a time when vegetables are scarce.

We do not hesitate to recommend this variety, as its fine qualities, as well as its heavy-producing records, are seldom equaled by any other.

OLIVES

The olive is rapidly attaining a place of prominence in California, especially in the interior valleys where its highest state of perfection is reached. The olive tree makes a fine border or avenue tree besides producing a fruit that has no equal in commercial value.

This tree is best adapted to a deep loam that is well drained. It should be planted thirty feet apart either in the orchard or avenue. Before shipping we cut back all trees and prune them immediately as they are dug. The roots are covered with thick mud to prevent their drying out. When the stock is received by the planter it should be unpacked at once and trenched in the ground soaked with water. At planting time the trees should be taken out of the trench a few at a time and carried into the field with their roots wrapped in wet burlap.

OLIVES—MISSION AND MANZANILLO

	$\frac{3}{4}$ to 1 in.	$\frac{5}{8}$ to $\frac{3}{4}$ in.	$\frac{1}{2}$ to $\frac{5}{8}$ in.
100 rate, 50 to 299 trees...	\$.90	\$.80	\$.70
10 rate, 5 to 49 trees.....	1.00	.90	.80
Single rate, 1 to 4 trees...	1.25	1.10	1.00

MANZANILLO—The Manzanillo olive was introduced from Spain and is one of the most highly recommended and extensively planted of all varieties. The tree is a strong grower of a decided weeping habit. The foliage is darker in color than that of the Mission.

The fruit of the Manzanillo is large, oval in form, and has a distinct tint at the lower end and is almost black when fully ripe. While the Manzanillo and Mission are about equal in price on the market, the Manzanillo being two weeks earlier in ripening gives it a considerable preference in sections where early frosts are likely to occur.

It is highly recommended for the making of green and ripe pickles, as well as for the making of oil. Ripens early in October.

MISSION—Mission is one of the oldest and best varieties of olives known, having been brought to this country by the old Spanish Padres and grown around the old mission from which it derived its name. Some of the old trees are still to be seen growing which gives an idea of the long life of the olive tree.

While the tree of this variety is very ornamental it is also very profitable. It grows large and is a very heavy producer. The fruit is medium to large and while oblong in shape is more round on the lower end than the Manzanillo. Flesh is very firm and is highly recommended for the making of both green and ripe pickles, as well as oil. Ripens late in October.

ASCOLANO—This variety is known as the "White Olive of Ascoli." It has been largely planted in California and is well recommended in all the olive sections.

It is extremely large size, often being as large as a French prune, which it also resembles in shape. The tree is a strong, spreading grower, has a beautiful foliage, and produces large, early, and abundant crops. The fruit is of a bluish black when ripe and is highly flavored. It is one of the best of the Italian varieties for pickling. Ripens the first of November.

THE BERRY FRUITS

Complete descriptions are given of the berry fruits in the succeeding paragraphs. All berries except gooseberries, the red and white varieties of currants, and raspberries which do not thrive in the hot interior valleys, if given the proper care, are well adapted for general planting.

Strawberries

Due to the ideal climatic conditions in California the strawberry plant blooms and bears almost the entire year.

The strawberry is adapted to various kinds of soils, but it thrives best in deep, moist, loamy soils. Bogs or swamps should not be used unless drainage is furnished. In some sections the plants will scarcely withstand the summer without irrigation, and everywhere the succession of crops depends upon this important factor. It has been ascertained through experience that light, warm soils produce the earliest and highest-flavored berries, and that the heavy soils produce the later and larger ones. However, the size of the berry is largely dependent upon the amount of available moisture. As the strawberry is a shallow rooting plant there must be moisture near the surface. A shallow loam over clay will prevent the escape of the water, and it makes an excellent strawberry plot.

LAYING OFF GROUND FOR STRAWBERRIES — The soil should be deeply and thoroughly harrowed, and the surface graded so that water will flow slowly in the ditches. The inclination for water distribution may vary. In some places it is very slight, about two inches to the hundred feet, while in others a much greater fall is required. Sometimes in grading the field, blocks must be provided with opposite inclinations for the return of the water. On hillsides, where the water is carried down a ridge to a flume, only enough is taken out to reach the ends of the small ditches. Six inches to the rod is the grade used for hillside irrigation.

There are many ways of laying out strawberry beds. Flat cultivation, where single rows two and a half to three and a half feet apart, are laid out, is suitable to some sections. Again they are laid out in double rows a foot and a half to two feet apart. Between each pair of rows the soil from the center is drawn up to each side, forming a level a trifle higher than the one on which the plants are set. Another good plan is to set the plants in double rows on a slight ridge, leaving a furrow between the beds to serve as a walk and for irrigation. The plants are set on the sides of

these ridges, and vegetables are sometimes grown on the top of the ridge between the rows of berries the first year. The water is drawn up from the trenches by the roots and capillary attraction, thus preventing the upper surface from baking. Be careful not to pack the ground around the plant in any way. This is undoubtedly the best method for large strawberry beds. A great deal of labor can be saved by placing a cover of fine, clean straw over the surface of the bed. This serves to retain the moisture as well as furnish a clean surface for the berry to rest on.

The plants are always set at less distance in the rows than the rows are from each other. One foot between the plants is a commonly used distance, although there is a range of from eight to eighteen inches.

PLANTING STRAWBERRIES — The plants should be set out either in spring



Banner Strawberries

or fall, or in the winter when the ground is warm and in good condition. Fall planting usually gives a better spring crop, although planting is carried on successfully as late as February. Spring planting is in April and May. In parts of the state where it is drier, early fall or winter planting is advisable. When the ground is dry it should be thoroughly irrigated before planting, or a little water should be used in setting out each plant. When planting, remove all leaves from the plant, shorten the roots to three inches, and do not allow the plants to dry while planting. Carry them around in a vessel of water if necessary.

In setting out plants be careful not to bury them. Scoop out a little place in the soil with the hand or a trowel, spread the roots well, and cover them with a fine soil. Another method is to make a hole with a dibble, drop the roots into it, and press the soil around them with the dibble. Still another way is to set the plants on the side of the furrow and completely cover them with the next furrow. If the plants are not set too deep, and they are given plenty of moisture, any of the above methods of planting will prove satisfactory.

BANNER OR NEW OREGON—Recommended among berry growers, who are familiar with it, as being one of the earliest, most uniform and heaviest yielding varieties of all the strawberries yet originated. The berry is of large size, brilliant deep rich red in color. When fully ripe, its glossy appearance would lead one to believe that it might be varnished. The flesh is a blood red in color and possesses a very distinct flavor very much similar to that of the wild berry.

The plant is a strong grower, affording plenty of protection for the berries and is one of the very earliest, being often found in the market in the early part of May, and is a favorite throughout the strawberry season.

It remains in perfect condition on the vines from two to four days after ripening; besides being excellent for canning purposes and the making of preserves, it has practically no equal for handling and shipping purposes.

Do not forget the good points in favor of this variety—large, uniform size—deep rich red color throughout. One of the earliest and heaviest bearers and the best shipper.

BRANDYWINE—The Brandywine strawberry is one of the most valuable of the medium-to-late varieties and the plant is very hardy and productive. It is highly regarded for home use and as a market variety. The flesh is firm, berries of large size, roundish, and somewhat conical in shape, a deep blood red in color, having a bright red flesh and a small yellow seed. It has a very high flavor and somewhat subacid.

It is regarded as one of the best for commercial purposes through the Los Angeles district and southern parts of California.

MARSHALL—The Marshall is a very dark red strawberry and the seeds are quite prominent. The flesh is of a bright red color, and attractive, especially when used for the making of jams or preserves. In fact, it is classed among berry growers as a fancy berry and demands the highest market price, being sold mostly for fancy trade. It also enjoys the reputation of being a good keeper, especially when held in storage.

The berries are large and of the finest quality and hold up well during its whole ripening season.

The plants are healthy, strong growers, and productive. This variety enjoys great popularity throughout California and the Pacific Coast.

Blackberries

This berry enjoys a good market in California. It is a hardy grower and will bear good crops without irrigation, but it readily responds to moisture and will produce a better and larger crop if it is used. No general rule can be established for irrigating as different localities require different rules. Fine, large berries and new canes should form at the same time, and if the plant refuses to do this it is suffering from lack of irrigation.

Thoroughly cultivate the soil in order that moisture may be retained. A horse-hoe with a long knife running horizontally, or with sharp, duck-foot teeth, is the best implement to keep the ground free from weeds and suckers and the surface soil loose. Whenever irrigation is applied cultivation must follow. Any space in the row which cannot be reached with the cultivator must be kept free from weeds and barked with a hoe.

PRUNING AND TRAINING—Pruning is as essential to the blackberry as to any other fruit. At planting the cane should be cut back near the surface of the ground and marked with a small stake. Do not check the top growth at first, but as the new canes grow out pinch them at the tip so that lateral branches will form the next year. If canes are to be tied to a stake or trellis they should grow to a height of five or six feet before pinching off the bud; if the canes are to stand alone pinch off the bud when it is four feet high. The ends should be pinched off from eight to twelve inches from the main stem. If only a few plants are grown the pinching may be done with the thumb and finger, but where there is an extensive growth the cutting back is done with a sickle, corn hook, or sharp butcher knife several times during the summer. When supports are used gather the four to six canes which are left to each stool within a loosely-drawn bale rope and tie them to the stake; or where a trellis is used bring the branches up to the wire so that there is about the same distance between the shoots.

CORY'S THORNLESS BLACKBERRY—This is a new blackberry of mammoth size and will undoubtedly become the most popular blackberry of any yet known.

Unlike other varieties this vine is entirely free from thorns, which is a very attractive feature when harvesting the fruit.

It is a strong, rapid grower, an early and a heavy bearer. Berries are of extra large size and a very fine flavor, having a small core, but few seeds, and an abundance of sugar. This variety is especially valuable for the making of jams and preserves, but is very valuable for all cooking and market purposes.

It is said by expert berry planters that Cory's Thornless will grow and thrive in most any soil or climate and when properly cultivated, individual vines have been known to produce as many as fifteen three-quart-pound baskets at one picking. Many of the berries measure as much as three inches in length.

Planters can readily see that the rapid growing and heavy bearing qualities of this variety, coupled with the small expense of picking, compared with other varieties, make it a decided favorite and a great leader for berry planters.

HIMALAYA BERRY—One of the most remarkable growers of all berry plants. Sometimes growing as much as thirty to forty feet in a single season. To obtain best results it must be trained on a trellis.

This vine is a heavy bearer, having been known to produce as much as 400 crates per acre. The fruit is large, black, round in shape, firm, juicy, and has very small seeds.

It is of excellent quality for shipping, as well as for home uses, and is one of the best berries on the market.

It was imported from the Himalaya Mountains by Luther Burbank, who deserves great credit for its introduction. Ripens from June 15 to late fall.

MAMMOTH BLACKBERRY—The growing habits of this variety differ greatly from those of any other variety, being a decided trailer in habit and making a growth of as much as twenty feet in a season.

The canes are very large, covered with thick foliage, of a deep green color. The vine is very

productive and ripens exceedingly early, being three weeks earlier than any other varieties.

The fruit is large in size, often measuring $2\frac{1}{2}$ inches in length; seeds are small, soft, and abundant. It possesses a fine flavor and is said by many berry growers to be a cross between the wild blackberry and the Crandall's Early. We highly recommend the planting of this variety. Ripens in June.

LAWTON BLACKBERRY—This is one of the standard berries among growers, as it comes at a time when most other blackberries are gone.

The berries are large and contain a good percentage of sugar. The vine is a strong grower and a good producer.

To those desiring a late blackberry for home use the Lawton will be found very satisfactory.

LOGANBERRY—A hybrid between the raspberry and wild blackberry and was originated at Santa Cruz, California, by Judge J. A. Logan, in the year 1881. In 1893 it was introduced to the public, through the University of California, and has since become very popular among berry growers and users in general.

The vine is an exceedingly strong grower and has a fine foliage which affords plenty of protection to the berries. The fruit is very large and attractive, sometimes being an inch and a quarter in length.

It resembles very much the shape of the blackberry and has the dark red color of the raspberry. Its flavor, however, is a combination of both; when used in making preserves, the raspberry flavor predominates.

It is highly regarded for the making of jelly, jam, pies, or for eating as a dessert. As a market variety it has no equal, the demand always exceeding the supply. Ripens in May.

Raspberries

NICK OHMER—An ideal market variety; early, heavy cropper; the bright red berries color evenly and hold their finish and size through a long season, and appear immune to disease. Nick Ohmer is one of the few Eastern introductions that have made good under California conditions. Its early bearing, heavy yield, and the splendid keeping qualities make it profitable commercially.

RENERI—This is one of the latest introductions and certainly has its merits. The canes are not so thorny as other varieties. It comes into bearing almost immediately. The berry is of good size and color and is sure to be the most popular of the raspberries.

RANAREE—This splendid new raspberry is three weeks earlier than other sorts and bears heavily until frost. The large, fine flavored, red berries are good shippers. We have tested it carefully and can recommend it for this section.

CUTHBERT—This is the leading red raspberry in California. It is a strong and hardy plant, free grower and an abundant bearer.

The foliage is large and abundant, which affords ample protection to the fruit. The berries are large, a beautiful deep crimson in color, possessing a most pleasing flavor.

Unlike many other berries, the Cuthbert is very easily picked and holds up well in shipping, consequently is highly prized not only for home use but as a commercial and shipping variety.

Gooseberries

DOWNING—Originated at Newburgh, New York State, and is recommended as one of the best varieties for planting.

The bush is a strong grower and a good bearer. The berries are large, roundish in shape, whitish green in color, smooth skin, and strongly acid in flavor. It might be said, however, that all gooseberries do better in the cooler climates, such as Coast regions and higher altitudes. Downing is well recommended for the making of pies and other home cookings.

OREGON CHAMPION—So called as it is indeed the champion of gooseberries. It was originated in Oregon and has but few thorns, which certainly is an attractive feature to those growing gooseberries for market purposes.

It is a vigorous grower and produces berries of large size, brownish red in color when ripe and of fine flavor. We do not hesitate to recommend this variety for planting in all gooseberry sections.

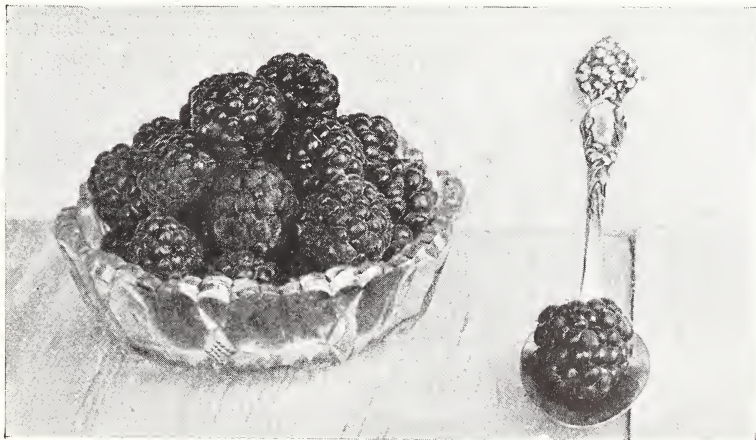
Currants

FAYS PROLIFIC—Originated in Chautauqua County, New York, and is supposed to be a cross between the Cherry and the Victoria.

The berries are of large size and a fine flavor. The bush grows to a large size, has plenty of foliage, and is an exceedingly heavy producer.

It is said by growers of currants that the Fay's Prolific has been known to yield three times the crop of other red varieties when planted side by side. We certainly do not hesitate to recommend this variety.

CHERRY—The Cherry currant is an erect, stout, vigorous grower and a heavy producer.



Reneri Raspberries

Like most other varieties of currants it does not do well in the warm valley climates but is very productive and highly recommended for the Coast and cooler climates.

The berry is large, of a deep red color, rather acid in flavor, and is a good keeper. It is highly recommended for home use for the making of red currant jelly and also for the making of pies. Aside from being valuable in the family garden it is largely grown for market purposes.

WHITE GRAPE—The bush of this variety has a tendency to grow rather low and is of decidedly spreading habit. The foliage is of a beautiful dark green color and affords ample protection to the currants.

It is a strong, healthy bush and is very productive. The berries are unlike any of the other varieties we have described, being of a yellowish white in color, sweet, and of a mild acid flavor. Highly valued for table and home use.

CRANDALL'S BLACK—While most currants and gooseberries do well in the cooler climates and Coast regions, there are scarcely any varieties to be found that are adapted to the warmer and valley sections. Crandall's Black, however, has been planted quite extensively throughout the San Joaquin Valley and other hot regions of California and has been found to be a vigorous grower and a good producer.

It is said to be a seedling of the wild currant. The berries are large, often being from one-half to three-quarters of an inch in diameter. The fruit is of good quality and fine flavor. We know of plantings of this variety in the very warmest districts that are producing well and bring the highest market prices. To those in warm regions who desire to plant currants for their own use we do not hesitate to recommend strongly the planting of this variety.

RHUBARB

MYATT'S LINNAEUS RHUBARB—One of the best of the old varieties which has been so extensively planted. While other sorts, of late years, have been introduced, Myatt's Linnaeus is still a leader.

Its tenderness and fine flavor are superior to any of the other varieties. Its earliness is also in its favor, as it comes at a time when fruits are scarce, and is very acceptable to housewives in general for the making of sauce, pies, etc.

We recommend it as one of the best and earliest, and would suggest that it be planted in every family garden.

BURBANK'S CRIMSON WINTER RHUBARB—Is one of the valuable introductions of Luther Burbank of Santa Rosa, California. It is of large size, stocks often averaging twelve to eighteen inches in length and one inch in diameter. It is a beautiful crimson green in color, and of the very finest quality.

Where planted throughout California and kept moist it will produce abundantly at any season of the year. It has been known to grow vigorously in October and produced all through the winter season. In colder regions, however, such as Oregon, it does not produce in the winter, but the first opening of spring finds the shoots coming through the ground.

We highly recommend this variety for growing both in the family garden and for commercial purpose.

FIGS

The industry of fig growing has increased to such a degree in California that it now produces more figs than any other state in the Union. The warm interior valleys are most suitable to its production.

Most any soil will do for the fig except subirrigated or overflowed areas which cause the roots to rot and the fruit to sour on the trees. The fig requires just as careful cultivation as any other fruit tree, and if given proper treatment an abundant crop will be harvested.

In heavy, rich soils the trees should be set thirty-five feet apart, but under ordinary conditions thirty feet is sufficient. Pruning is one of the primary features in the cultivation of a fig orchard. Cut the tree back to eighteen inches at planting and wax all cuts. Leave three or four branches to form the head of the tree that are evenly distributed so that crowding is avoided. Two-thirds of the new growth is cut away the second season with not more than two shoots left on each framework branch. The new growth is shortened one-half the third winter and the lateral branches are reduced to two on each limb. Continue pruning the overlapping branches. For the first two years after planting sun protectors should be used.

	FIGS 4 to 5 ft.	3 to 4 ft.	2 to 3 ft.
1000 rate, 300 or more trees.	\$.35	\$.30	\$.25
100 rate, 50 to 299 trees.	.40	.35	.30
10 rate, 5 to 49 trees.	.45	.40	.35
Single rate, 1 to 4 trees.	.65	.60	.50

CALIMYRNA—The culture of Smyrna figs in California began in 1882, when a large number of scions were imported from Smyrna. Out of this consignment developed a number of varieties of which one stood preëminently to the front. For the purpose of marketing this now famous variety it was given the trade name "Calimyrna."

The tree is a strong grower of spreading habit, leaves large and deeply lobed, of dark green color, and slightly downy underneath.

Fruit large to very large, skin fine lemon yellow color, flesh thick and meaty and of a dark amber color when ripe.

The dried product contains a higher percentage of sugar than any other fig. Dries readily and makes the finest commercial packed product.

MISSION—Commonly known as Black Mission or California Black and is one of the oldest figs grown in California. It is also grown in the Southern states and Mexico.

The tree is a very strong grower, often attaining a height of 75 feet and a spread of 50 feet. It is a regular and heavy bearer and has been proven to be a very profitable variety both as a shipping and drying product. The fruit is large, having a rough but thin skin, of a deep violet color; quite sweet, but not of a strong flavor.

CITRUS FRUITS

The growth of citrus fruits ranks as one of the foremost horticultural industries in California. The most important of the citrus fruits are the orange, lemon, and pomeloes. Districts most suited to their production are south of the Tehachapi in the interior counties, the San Joaquin and Sacramento valleys, and the foothill regions of the Sierra Nevada Mountains. Even with this huge acreage of citrus fruits not one-half of the land suitable for their culture has been utilized.

The deep, heavy, rich, well-drained loams are best adapted to their growth. The Washington Navel oranges are planted twenty-four feet apart; the Valencias from twenty-four to twenty-six feet; lemons and pomeloes twenty-four feet. The slower growing varieties are planted fourteen to sixteen feet apart.

The ground should be thoroughly plowed, cultivated, leveled, staked off, and marked where the holes are to be dug. The holes should be dug at least eighteen inches square and the same depth. If the holes are blasted out, settle the soil with water before planting the trees. Be very careful that the earth does not dry out around the roots before planting. This can be done by thoroughly moistening the roots and soil. These trees should be headed back to twenty-six inches. The body of the tree should be provided with protectors for the first two or three years as these will protect the trees from squirrels and rabbits girdling them, as well as from sunburn.

Citrus trees are budded either on sweet or sour orange seedlings, but those budded on sour seedlings thrive best in heavier soils and are more resistant to gum disease.

Very little pruning is required for these trees. Select the first upright branches to form the head of the tree, and remove any overhanging ones. Cut away all dead branches, all those failing to bear fruit,

and all water sprouts and suckers as they appear. The trees usually bear in the third or fourth year, and in the eighth year should yield a profitable crop.

CITRUS FRUITS

ORANGES, LEMONS, AND GRAPEFRUIT

	Each.	10	100	1000
1 in. and up...	\$2.50	\$22.50	\$200.00	.....
$\frac{3}{4}$ to 1 in...	2.00	18.00	160.00	.....
$\frac{5}{8}$ to $\frac{3}{4}$ in...	1.75	17.00	150.00	.....
$\frac{1}{2}$ to $\frac{5}{8}$ in...	1.50	14.00	135.00	.....

Oranges

MEDITERRANEAN SWEET—For many years this variety has been planted throughout the different orange sections.

The fruit is medium to large, having a skin of fine texture. The pulp is very good and has but few seeds. The tree is inclined to be of a dwarfish habit, but is a very heavy bearer. Ripens fruit as late as May or June.

RUBY BLOOD—The tree is a strong, vigorous grower and a heavy bearer. While it is not extensively grown or used for market purposes it is highly prized for home use.

The tree when loaded with fruit is very ornamental and makes an attractive addition to either the front or back yard. The fruit is medium in size, nearly round, having a thin, smooth, yellow skin. The pulp is rich, very juicy, streaked with blood red. Ripens January to April.

SATSUMA—The Satsuma orange bears the reputation of being the hardest of all edible oranges. The tree is of a spreading and drooping habit and bears fruit at an early age. The fruit is of medium size and rather flat in shape and deep orange in color. Flesh is fine grained, tender, sweet, delicious, and so few seeds are ever found that it is termed seedless.

This is undoubtedly one of the best of the Mandarin family, and on account of its heavy bearing qualities, its early ripening, and its many other attractive features, should be found in all home grounds. Ripens October to December.

WASHINGTON NAVEL—This, the leader of all California oranges, was imported from Bahia, Brazil, in the year 1870, by Mr. W. Sanders of the Department of Agriculture at Washington. It is said to derive its name from the fact that it was first grown in Washington and also from the peculiar formation of the blossom end of the fruit.

The more this variety has been cultivated and exhibited the more popular it has become until



Orange Trees Ready for Shipment

now it is classed as the queen among oranges, and is more widely grown than any other variety.

The tree is a strong, rapid grower and a prolific bearer. The fruit is medium to large, juicy, possessing a fine flavor and so few seeds are ever discovered that it is termed as seedless.

THOMSON IMPROVED NAVEL—Was discovered by A. C. Thomson of Duarte, Los Angeles County, California. It is a very fine fruit of high quality and fine appearance. It is supposed by orange growers to be a natural variation of the Washington Navel. However, in some localities, chiefly where planted for family use, it is preferred to the Washington Navel. Its time of ripening is November to January.

VALENCIA LATE—Is the leading summer orange and very similar to the paper rind St. Michael in color and texture. The fruit is large, oblong, firm, and juicy, with very little rag. Ripens late, reaching the markets when all other varieties are gone, thus commanding the best prices. Valencia Late should be planted only in sections that are practically free from frosts. Fruit ripens in June but will remain on the tree in good condition as late as September.

Lemons

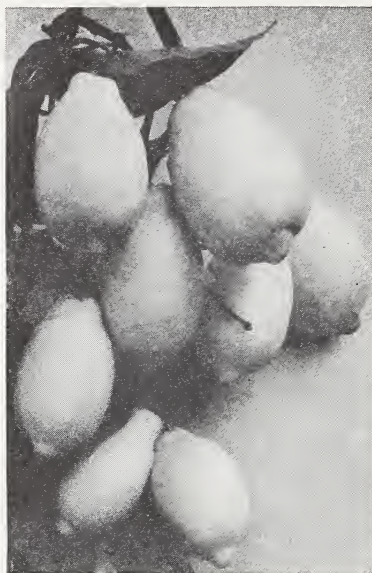
LISBON—While first grown in California by Mr. D. M. Burnham of Riverside, the Lisbon is supposed to have originated in Portugal. The tree is a strong grower, a prolific bearer, and has a beautiful compact foliage, which is highly ornamental. While young the tree is inclined to be very thorny, but the thorns disappear as the tree grows older.

The fruit is uniform in size, rather oblong in shape, having a thin skin, fine grain, and plenty of acid.

While this variety is not classed as a seedless there are very few seeds to be found in many specimens.

EUREKA—The Eureka originated by C. R. Workman of Los Angeles, California, bears the reputation of being more widely grown in California than any other variety of lemons.

The tree is a vigorous grower and unlike other varieties is practically free from thorns. The fruit is of medium size, smooth, glossy, and an excellent keeper. In many sections of the state



Eureka Lemons

the lemon tree blooms and sets lemons all the year around.

This is a very attractive feature of the Eureka, as lemons are usually much in demand during the summer months and at this period it might be said the Eureka produces more lemons than at any other. It is also regarded as very valuable in sections where frost sometimes occurs on account of its having several crops.

Aside from its strong growing and heavy bearing qualities it is highly ornamental, as there is no other variety of fruit which blossoms and bears fruit at the same period of the year.

VILLA FRANCA—Originated in Europe and is regarded by lemon growers of California as



Orange and Lemon Trees

the hardiest variety, withstanding lower temperatures better than any other. The tree is of somewhat drooping habit, with an abundance of beautiful glossy foliage, and thornless.

The lemons are of medium size, oblong, and slightly pointed at the blossom end. The rind is practically free from bitterness and of a beautiful yellow color. The pulp is juicy, contains plenty of acid, and while not classed as seedless very few seeds are to be found.

In lemon growing sections the planting of this variety is recommended.

Pomelo or Grape Fruit

MARSH'S SEEDLESS—While there are other varieties of pomeloes grown, the Marsh's Seedless is so much superior in quality and size, that many nurserymen have deemed it advisable, on account of the heavy demand for this sort and the small amount of inquiries for others to propagate it only.

The tree is a strong grower and highly valued as an ornamental. The leaves are large and glossy; in fact, many people who do not care for the grape fruit to eat plant the tree purely for its ornamental appearance.

The fruit is large, skin very smooth, beautiful light yellow color when ripe and hangs on the tree well. The pulp is juicy and contains very little rag.

On account of the absence of seeds, the extreme fine flavor, good shipping qualities, and productiveness of Marsh's Seedless, we do not hesitate to recommend it to all pomelo or grape-fruit planters.

Limes and Tangerines

BEARSS SEEDLESS—Out of the many varieties of limes that have been planted and tested in California, the Bearss Seedless has been found to be the best of all.

The fruit is large, very juicy, with a pronounced acidity and practically seedless. The tree is quite hardy, productive, and, like the Eureka lemon, blooms and sets fruit all the year.

DANCY TANGERINE—This variety is often called the kid glove orange, as it can be easily peeled without removing or soiling one's gloves. The tree is a vigorous grower and a good producer. The fruit is small, juicy, rich in flavor, and very aromatic. The skin is quite red in color and very smooth. Ripens from December to February.

Guavas

(*Psidium cattleianum*)

The guava is much sought for jelly making and preserving, and is greatly relished eaten out of the hand when fully ripe. The Strawberry guava may be used as an ornamental shrub to advantage, either as a single specimen plant, in groups, or as a hedge or large border. Ripens in October and November.

YELLOW STRAWBERRY GUAVA—Similar in habit of growth to the above. Fruit is yellow, being large and of milder flavor than the common red variety. Field grown, fruiting size, balled, \$1.00 each, \$9.00 per 10; potted, in gallon containers, 2 to 3 ft., 75c each, \$6.00 per 10; quart containers, 1 to 1½ ft., 50c each, \$4.00 per 10.

STRAWBERRY GUAVA (*Psidium cattleianum*)—A fine glossy-leaved shrub or small tree, which produces in abundance a luscious fruit

about the size of a large strawberry; round, and deep reddish-brown color. The fruit is highly prized for table use when fresh, and for jams and jellies has few equals. Field grown. Extra large fruiting size, 2½ to 3 ft., balled, \$1.50. Balled 1½ to 2 ft., \$1.00 each, \$9.00 per 10; potted, in gallon containers, 1½ to 2 ft., 75c each, \$6.00 per 10; quart containers, 1 to 1½ ft., 50c each, \$4.00 per 10.

LEMON GUAVA (*Psidium guajava*)—One of the finest of the guava family; large, pear shaped, yellowish fruit; the bush is somewhat tender and should be grown only in the most favored localities. Field grown; balled, \$1.00; potted in gallon containers, 1½ to 2 ft., 75c; quart containers, 12 to 18 inches, 60c.

Mango

(*Mangifera indica*)

Only a few trees of the mango are now growing in California and these are mostly seedlings. They bear well and fruit is very good. Tree tender, and should only be planted in protected, almost frostless situations.

HADEN—Size medium to large; average weight, one pound; shape, oblong; color, rich golden yellow, carmine on side exposed to light; purple bloom; skin, smooth; flesh, golden yellow, tender, melting, sweet, and delicious. Season, July-August. Box grown, \$5.00.

Avocados

AHUACATE—ALLIGATOR PEAR—This tree is a tropical fruit first introduced into California as early as 1856. It is found in its native habitat in Mexico, Guatemala, and the West Indies. The leading varieties which produce the commercial fruits and selected seedlings which have proven to be of value in size and quality (the quality being an essential point in selection) are budded on seedling roots.

These trees should be planted in warm locations which are not subject to biting frosts, as the trees are tender and new growths are liable to be injured. Fruits vary in size from 1½ to 6 inches in length and range in color from green to purple. The proper distance to plant these trees in orchard form is 30 feet apart, and the bodies should be covered with tree protectors.

The fruits are used for salads and desserts. When taste is once acquired for avocados, people become very fond of them. The avocado has the highest food value of any known fruit.

HARMAN—The tree is a very strong grower and an abundant bearer. The fruit of the Harman averages from three to four and a half inches in length and weighs about six to ten ounces. It is of a greenish purple color, having a smooth, glossy surface, covered with yellowish dots. The flesh is of a creamy color, of fine quality, buttery and rich in flavor.

The seed is somewhat larger in this variety than in most avocados. This variety is considered one of the best for dessert purposes. Ripens from October to December.

NORTHROP—Originated at Santa Ana, California, and resembles the pear in shape. It is of medium size and weighs from 8 to 10 ounces. The skin is smooth, glossy, and purplish black in color. The flesh is a creamy yellow color, containing very little fiber and of very rich flavor. This variety analyzes about 25 per cent fat.

The tree is hardy and a prolific bearer and has the distinction of being one of the avocados which produces two crops in a season. The first crop ripens from October to November;

the second crop, which is smaller than the first, ripens in April and May.

On account of its two crops and its prolonged ripening period we strongly advise the planting of the Northrup in family orchards, as well as for commercial purposes, wherever planters have land sufficiently protected for the growing of avocados.

TAFT—The Taft was originated in Orange County, California, in 1912. It is a pyriform fruit, measuring about five inches in length, and weighs from fourteen to twenty-five ounces.

The skin is thick, rather rough, and of a deep green color. The flesh is light yellow in color and very rich in flavor. The tree is a vigorous grower, very ornamental, and bears the distinction of being one of the hardest of the avocado family.

The Taft is considered by those growing avocados in a commercial way to be one of the most profitable varieties on account of its early ripening period and heavy bearing qualities. Ripens June to August.

SEEDLING—The seedling avocado tree is much the same as seedlings of other fruits. While it produces a fairly good fruit it is always found to be inferior to that of the budded varieties.

Thin-Skinned Avocados

The thin-skinned varieties are the hardiest and therefore may be planted in a large range of territory in California, but where high winds prevail care should be taken to plant the trees in protected places. The young trees should be protected when the thermometer goes as low as 28 degrees above zero. Older trees—five years or more—have passed through weather 20 degrees above zero without serious injury. This gives many an opportunity to have one or more trees bearing these highly nutritious nutty-flavored fruits in their gardens who have hesitated to plant heretofore. The fruits of these varieties weigh from 4 to 10 ounces, and as the skin is thin there is practically no waste in paring. The flavor compares very favorably with the larger thick-skinned varieties. Balled, field grown, weight 75 to 100 pounds.

BLAKE—Quite hardy, passing through the freeze of 1922 successfully in all sections. Shape pyriform, bottle-necked, 4 to 4½ inches long; skin very thin; color light green; flesh creamy yellow, smooth and buttery; highly flavored. Tree of vigorous, upright growth. Season, September and October.

CALIENTE—A hardy thin-skin fruit of excellent quality, which has the distinctive reputation of bearing heavy and regular crops in all sections in which it has been planted. It also has the added quality, rare in avocados, of becoming edible when picked before it is perfectly ripe. Precocious. Fruit purple, medium size. Ripening season, September and October.

GANTER—Medium size, form oval to oblong; skin thin, of greenish color; flavor and quality excellent; tree vigorous, uniform, and one of the most dependable bearers, fruiting early; desirable for home use in interior sections. October to December.

Feijoas

(Feijoa sellowiana)

This attractive tree or shrub grows to a height of about 15 feet. If pruned, it forms a striking, compact shrub. The leaves are glossy green with a whitish velvety growth beneath. The flowers are showy and extremely attractive. The delicious flavor of the fruit is rivaled by its strong and agreeable aroma, the taste reminding one of the pineapple and banana combined. It is hardy and of easy culture. The varieties named below are the best budded varieties. The fruit of each is large, and the parent trees bear good crops. Seedlings bear uncertainly.

CHOICEANA (pronounced Choice-e-ana)—A coined word to describe the fruit as choice, with a banana flavor. One is also reminded of a pineapple flavor. A valuable new introduction to the list of tropical fruits for California; foliage and flowers exceedingly attractive; fruit oblong; about the size of a large hen's egg, measuring 3 inches in length by 2¼ inches in thickness; rich in flavor. Is in great demand for home places, as the fruit is delicious for jelly, jam, and sauce, as well as to eat fresh when fully ripe. Will stand cold to 16 degrees above zero. Ripens in November. Grafted specimen plants, extra size, \$3.00; fine bushy plants, \$2.50 each, \$20.00 per 10; quart, containers, \$1.00 each, \$9.00 per 10.

COOLIDGE—Not as large as the Choiceana but of the same shape. Skin smooth; flavor very good; an excellent bearer. Ripens in November. Grafted, potted, 1 to 1½ ft., \$1.50.

SUPERBA—So named because it is a superb Feijoa. Similar in flavor to Choiceana—as large, but oval or apple shaped. It is advisable to plant two varieties. Grafted, fine bushy plants, balled, \$2.50 each, \$20.00 per 10; quart containers, \$1.00 each, \$9.00 per 10.

SEEDLINGS—Suitable for ornamental plantings and often bear crops of good fruit, but there is no certainty as to its size or quality; makes a striking hedge or low background. Balled, 1½ to 2 ft., \$1.00; potted, 1 to 1½ ft., 60c each, \$5.00 per 10; in flats, 2-year, \$12.00 per 100.

Carob—St. John's Bread

(Ceratonia siliqua)

The carob is a handsome evergreen tree well adapted for ornamental avenue and border planting. While the carob is not a rapid grower it thrives under arid conditions and is undoubtedly destined for much wider planting, particularly in California and Arizona. Adapted to Coast as well as interior regions and may be safely planted where the orange grows, although young trees need protection for two or three years where the temperature is below 26 degrees.

The greatest future for the carob tree is in the fact that the trees bear pods which are rich in protein and sugar, and therefore make a valuable food for all kinds of stock. The seedling trees are not guaranteed to bear pods, but are desirable for ornamental purposes. The budded varie-

ties we list are perfect flowering (bearing both male and female flowers) and therefore may be depended on to bear pods. Mature trees of good budded varieties are known to yield from 900 to 1500 pounds; the trees grow to a height of 40 to 50 feet; the pods ripen in September and October.

BOLSER—From original trees in San Bernardino County; tree a good grower, produces well. Very precocious, often bearing pods the first year. Chemical analysis by University of California shows 52% sugar. Budded, in 5-gal. containers, 5 to 6 ft., \$3.50; in boxes, 6 x 6 inches, \$2.00 each; \$18.00 per 10.

EXCELSIOR—The fruit pods are medium size, containing a high percentage of sugar; tree is an upright grower with rounded top; the foliage is a beautiful shade of green with a suggestion of gray. Chemical analysis by University of California shows 43.5% sugar. Budded in boxes, 6 x 6 inches, \$2.00 each; \$18.00 per 10.

SEEDLING—For ornamental planting. Seedling Carob trees are useful, but like all seedlings, trees are uncertain as to bearing fruit; part of these are male, hence non-bearing; the remainder bear fruit pods varying in quality. In boxes and in 5-gal. containers, 7 to 8 ft., \$3.50; 6 to 7 ft., \$2.75; 5 to 6 ft., \$2.25; 4 to 5 ft., \$1.75; 3 to 4 ft., \$1.50; gallon containers, 2 to 3 ft., \$1.00 each, \$9.00 per 10.

Cherimoyas

(*Anona cherimolia*)

Commonly known as cherimoya, or custard apple. One of the delicious subtropical fruits worthy of cultivation. The tree grows to a fair size and forms a well-rounded top. The fruit is much relished when eaten out of the hand or as a table delicacy; pulp of a custard-like consistency. Plant only in favored situations.

DELICIOSA—A fine variety originating on the grounds of Mr. C. F. Wagner, Hollywood. Fruit large, shape irregular, quality good, flavor delicious. Single fruits weigh up to 1½ pounds. January. Budded trees, \$2.50.

BOOTH—A new sort from Mr. Booth's place in Hollywood. Fruit large, elongated in shape; skin rough; flesh light yellow; exceedingly delicious and rich in flavor. February to April. Budded trees, \$2.50.

Natal Plum

(*Carissa grandiflora*)

A striking and exceedingly ornamental flowering and fruiting shrub for specimen lawn planting, also for hedges. Grows to a height of 8 to 10 feet with a spread of 6 to 8 feet, but may be trimmed to any desirable shape. Branches spiny with beautifully shaped, glossy leaves; flowers large, white, and fragrant. Fruits which ripen almost continually—although the largest crop matures in the late fall—are of an attractive brilliant red color, about the size of a date and are edible. When cooked the fruit makes a delicious sauce hardly distinguishable from cranberries. Excellent for jams. Recommended for home planting. Balled, \$2.00, potted in 4 in. pots, 75c.

Queensland Nut

(*Macadamia ternifolia*)

The nut tree of subtropical Eastern Australia, attains a height in its native land of sixty feet. Withstands light frost and a temperature of about 26 degrees above zero. A handsome, evergreen park or shade tree bearing nuts of high quality similar in flavor to the filbert. The nuts hang in large clusters and the trees bear abundantly. Box grown, 2 to 3 ft., \$4.00.

Sapotas

(*Casimiroa edulis*)

The White Sapota or *Casimiroa edulis* grows to a height of 20 to 30 feet. The tree is a strong grower of rather spreading habit, with large five-fingered leaves. It thrives well near the Coast and in the milder sections of California. About as hardy as the lemon. The fruit is one of the most delicious of the subtropical fruits which may be grown in California.

GALLOWAY—(New.) From a seedling Sapota tree sold by us to Mr. A. E. Zapf of Orange some years ago comes this new variety. Tree is a good, strong, vigorous grower and serves as an ornamental shade tree. Fruit usually as large as a medium-sized apple, flattened in shape, with a rich, sweet, aromatic, pleasing flavor. Begins bearing early and so far has borne full crops of excellent fruit, which ripens from December to May. In 6 x 6 in. boxes, \$3.00.

HAMMOND—(New.) A Mexican seedling planted in Ventura County, where it has borne good crops of large fruits for a number of years. Fruit almost round, slightly oblong; about as large as a good-sized apple; ½ to ¾ of a pound; quality excellent; tree a good grower. Fruit ripens January to March. In 6 x 6 in. boxes, \$3.00.

COLLINS SEEDLESS—(New.) Parent tree now 30 feet high, growing in Southern California. Desirable for a shade tree. Fruit grows in clusters; quality extra good; has very little core and no seeds. Bears large crops regularly. Ripens October to January. In 6 x 6 in. boxes, \$3.00.

The Bud Is the Foundation of the Tree

Elmer trees are the result of many years of careful bud selection. Much of our stock is now pedigreed—we can trace its habit of growth and bearing qualities back for many years. We do not trust the selection of scions to employees. This important work is done by a member of the firm, and because we take the scions from matured trees in our bearing orchards we know the stock is free from disease and is clean, strong and healthy.

WINTER AND SPRING FLOWERING TREES

Quince

JAPAN SCARLET QUINCE—China; Japan. An old favorite. Flowers brilliant scarlet. Makes an impassable and beautiful flowering hedge. Bare root, 2 to 3 ft., \$1.00 each.

Flowering Peach

Highly prized for the great masses of double flowers borne early in spring before leaves appear. For best results they should be heavily pruned each year as soon as they have finished blooming. There are several forms and colors as follows: Double Red—Double, bright red. Double Rose—Double, pale rose. Double White—Double, pure white. Bare root, 3 to 4 ft., \$1.25 each.

Flowering Apple

Growth strong. Flowers semi-double, along stems, deep purplish red in bud, shell pink when open. March and April. Bare root, 4 to 6 ft., \$1.50 each.

Flowering Plum

PURPLE-LEAVED PLUM—Very ornamental small tree. Leaves deep purple in spring, gradually becoming greenish. Flowers numerous, white, appearing before leaves. Fruit reddish purple. Doubly beautiful and desirable for both blossom and foliage. Bare root, 3 to 4 ft., \$1.50 each.

In selecting the variety of shade or ornamental trees to plant, the shape, ultimate height and spread, and their appearance in general must be taken into consideration.

The various maples, the sycamore, the elm, and the linden are all fine for street planting. Our assortment is large enough to supply the particular kind of tree desired for any purpose.



Catalpa Shade Tree



Oriental Plane

DECIDUOUS ORNAMENTAL TREES

Maple

ENGLISH CORK-BARKED MAPLE—Europe. Beautiful small tree of compact habit. Leaves very small compared to other maples, dark green. Bark somewhat corky. Certain to attain popularity when better known. 4 to 6 ft., \$1.00 each, \$7.50 per ten.

OREGON or LARGE-LEAVED MAPLE—Oregon; California. A native tree of large size. Young branches rather stout, bluish and glaucous. Leaves very large, dark green, and deeply lobed. One of our best shade and avenue trees. 6 to 8 ft., \$1.50 each, \$12.00 per ten; 4 to 5 ft., \$1.20 each, \$10.00 per ten.

CALIFORNIA BOX ELDER—Native variety of Eastern Box Elder. Pinnate leaves, usually of five leaflets. Young branches light green. Particularly handsome when in bloom. 8 to 10 ft., \$1.50 each, \$12.50 per ten; 6 to 8 ft., \$1.25 each, \$10.00 per ten; 4 to 6 ft., \$1.00 each, \$7.50 per ten.

NORWAY MAPLE—Europe; Asia. A large, handsome tree of rounded form, with very broad, five-lobed, dark green, shining leaves. One of the most desirable for any situation. 6 to 8 ft., \$1.25 each; 4 to 6 ft., \$1.00 each; 3 to 4 ft., 75c each.

SYCAMORE MAPLE—Europe; Asia. A handsome tree of rapid, upright growth, with smooth, ash-gray bark. Leaves are large, five-lobed, deep green above, glaucous beneath. 4 to 6 ft., \$1.00 each; 3 to 4 ft., 75c each.

SCARLET MAPLE—Eastern North America. A medium, round-headed tree of slow growth here. Produces deep red blossoms, appearing before the leaves, which change to a brilliant scarlet in early autumn. 6 to 8 ft., \$1.50 each, \$12.50 per ten; 4 to 6 ft., \$1.25 each, \$10.00 per ten; 3 to 4 ft., \$1.00 each, \$7.50 per ten.

SILVER MAPLE; SOFT MAPLE—Eastern North America. Large tree of very quick growth. Bark nearly white. Leaves are deeply lobed and very variable in form, green above and silvery beneath. Bare root, 8 to 10 ft., \$1.50 each, \$12.50 per ten; 6 to 8 ft., \$1.25 each, \$10.00 per ten; 4 to 6 ft., \$1.00 each, \$7.50 per ten.

SUGAR MAPLE; ROCK MAPLE—Eastern North America. A well-known tree of stately growth, fine form and foliage, which assumes beautiful autumnal tints in cold sections. Leaves rather small, three or five lobed. Bare root, 6 to 8 ft., \$1.25 each; 4 to 6 ft., \$1.00 each; 3 to 4 ft., 75c each.

TEXAS UMBRELLA TREE—One of the hand-somest of our quick-growing shade trees. Leaves finely divided; flowers lilac colored and fragrant. Good specimens form a perfect umbrella head. Bare root, 6 to 8 ft., \$1.25 each, \$10.00 per ten; 4 to 6 ft., \$1.00 each.

Sycamore; Plane Tree

EUROPEAN SYCAMORE; ORIENTAL PLANE—Europe and Asia. This splendid tree is almost perfection for street and avenue use. Without training it forms a fine, spreading, well-rounded head. Almost entirely free from disease or pests. In hot climates the trunks should be shaded when first transplanted to protect the thin bark from sunburn. Leaves are large, dark green, and deeply lobed. Fruit heads from two to four on long, drooping stalks. Bark flakes off from trunk and older limbs. Everything considered, we believe this is the very best street tree for California use and do not hesitate to recommend it most thoroughly. Bare root, 8 to 10 ft., \$2.50 each; 6 to 8 ft., \$1.50 each.

Mulberry

WHITE MULBERRY—China. Tree of extremely rapid growth. Branches long and slender. Leaves rather small, lobed. Fruit elongated, white or violet. Useful for quick effect and to furnish food for birds to keep them away from more valuable fruit. Bare root, 6 to 8 ft., \$1.25 each, \$10.00 per ten; 4 to 6 ft., \$1.00 each.

CHINA SILKWORM MULBERRY—A medium-sized tree with very large, silky-like leaves; fruits rather small, black, sweet. Stands out very prominently as the leading variety for silkworm forage. Bare root, 6 to 8 ft., \$1.00 each, \$8.00 per ten.

PERSIAN—This excellent fruit tree should be in every family orchard. Trees of rather slow growth, but bear young and produce the largest and finest fruit of all the mulberries. The fruit is black, large, one to one and a half inches long, with a fine aromatic flavor and abundant subacid juice. Commences to ripen in early summer and bears continually until late fall. Bare root, 3 to 4 ft., \$1.50 each.

Pistachio

CHINESE PISTACHIO—Beautiful, round-headed tree of upright growth. Leaves about ten inches long, with about eleven leaflets an inch and a half long. Handsome at any time, but glorious in the fall, when the foliage becomes an intense, vivid scarlet, unequaled by any other tree. Extremely rare at present, but sure to be widely planted when its adaptability to our climate and wonderful autumnal tints become better known. Bare root, 4 to 6 ft., \$1.50 each.

Poplar

BALSAM POPLAR; BALM OF GILEAD—Tall, large-headed tree of wonderfully rapid growth. Bark green on younger branches. Leaves dark green above, lighter beneath. Will thrive anywhere, and, at least when young, is the fastest growing tree in our entire collection. Bare root, 8 to 10 ft., \$1.25 each, \$10.00 per ten; 6 to 8 ft., \$1.00 each, \$9.00 per ten.

CAROLINA POPLAR—A very rapid-growing variety with large leaves; grows to a large size in short time. Valuable for street planting. Bare root, 6 to 8 ft., \$1.00 each, \$7.50 per ten.

LOMBARDY POPLAR—Widely known and esteemed for its decided individuality. Grows to a great height; narrow and columnar. Forms a strong contrast with most other trees, hence of great value in landscape work. Bare root, 8 to 10 ft., \$2.00 each, \$15.00 per ten; 6 to 8 ft., \$1.00 each, \$7.50 per ten.

Oak

SCARLET OAK—Eastern United States. Grows rapidly and forms round-topped, open head. Does well in dry situations. Leaves deeply divided, and turn to a vivid, brilliant scarlet in fall. Bare root, 3 to 4 ft., \$1.25 each.

BUR OAK—Eastern United States. A wide-spreading tree, with corky branches and very large, deeply lobed leaves. The acorn cups are fringed and bur-like. One of the grandest and noblest oaks. Bare root, 4 to 6 ft., \$1.50 each; 3 to 4 ft., \$1.00 each.

RED OAK—Eastern United States. Beautiful oak of rather rapid growth; forms large, majestic tree. Foliage turns dark red in autumn. Bare root, 3 to 4 ft., \$1.00 each.

Locust

COMMON or BLACK LOCUST—A native American tree of extremely rapid growth, valuable for timber as well as quite ornamental. The flowers are in long, pendulous racemes, white and very fragrant, appearing in June. Bare root, 8 to 10 ft., \$1.25 each, \$10.00 per ten; 6 to 8 ft., \$1.00 each, \$8.00 per ten.

PINK-FLOWERING LOCUST—Remarkable for its vigorous growth and fine, pink-colored flowers, which it produces in great abundance. Entirely distinct from Rose Acacia. Bare root, 8 to 10 ft., \$2.50 each, \$20.00 per ten.

EUROPEAN MOUNTAIN ASH; ROWAN TREE—Handsome, small tree of erect growth. Leaves pinnate, leaflets serrate. Flowers white, in flat clusters, four or five inches broad, followed by rather large, red berries. Very handsome at any season. Bare root, 10 to 12 ft., \$6.00 each; 6 to 8 ft., \$1.50 each; 4 to 6 ft., \$1.25 each.

Linden

AMERICAN LINDEN; BASSWOOD—Eastern United States. Fine tree of rapid, erect growth when young but ultimately forming a fine, broad, round head. Leaves large, light green. Bare root, 4 to 6 ft., \$1.00 each; 3 to 4 ft., 75c each.

EUROPEAN LINDEN; LIME TREE—Europe. The celebrated European street tree. Similar to American, but has smaller, deeper green leaves and red or yellow branches. Bare root, 4 to 6 ft., \$1.00 each; 3 to 4 ft., 75c each.

Elm

AMERICAN or WHITE ELM—United States. A magnificent tree, native from the Rockies to the Atlantic. Growth is erect, with smaller branches drooping when old. Grows rapidly here. Bare root, 8 to 10 ft., \$1.50 each, \$12.50 per ten; 6 to 8 ft., \$1.00 each, \$8.00 per ten; 4 to 6 ft., 80c each, \$7.00 per ten.

ENGLISH ELM—Europe; Africa; Asia. An erect, rapid-growing tree of spreading growth. Branches sometimes more or less corky. Leaves smaller than those of American, remain on tree late in fall. Bare root, 8 to 10 ft., \$1.25 each, \$10.00 per ten.

HUNTINGDON ELM—Of very erect habit and rapid, vigorous growth. Bark clean and smooth. Foliage dense, leaves large, dark green, remaining on the tree until late. Fine for street and avenue planting. The handsomest of all elms. Bare root, 15 to 18 ft., \$6.00 each.

Zizyphus

Asia. One of the handsomest smaller deciduous trees, thriving even in ground impregnated with alkali. Regularly round-headed, main branches stout, but secondary branches or branchlets very fine, often thread-like and drooping, bearing small, light green, highly glossy leaves. Fruit edible. Bare root, 4 to 6 ft., \$2.00 each, \$17.50 per ten.

Ash

AMERICAN WHITE ASH—Tall tree of rapid growth, with straight, clean trunk and broad, rounded head. Bare root, 8 to 10 ft., \$2.00 each, \$15.00 per ten; 3 to 4 ft., \$1.00 each.

ARIZONA ASH—A splendid rapid-growing tree for Arizona and California street and highway planting; recommended for soils tainted with alkali. Bare root, 3 to 4 ft., \$1.00 each.

Birch

Trees of vigorous and upright growth, but with slender, usually drooping shoots. Leaves rather small. Will thrive even in poor soils.

EUROPEAN WHITE BIRCH—Europe to Japan. Medium to large tree with white bark on the older limbs and trunk. Growth somewhat irregular. At about five years the young branches assume a drooping habit. Bare root, 4 to 6 ft., \$1.00 each; 3 to 4 ft., 75c each.

CANOE BIRCH; PAPER BIRCH—Northern United States. Bark on trunk and older limbs becomes paper-white similar to European birch. The cordate leaves are very much larger and darker; dull green above. Veins on lower surface are fleshy and covered with rusty down. Very distinct. Bark used by Indians for making canoes. Bare root, 10 to 12 ft., \$3.00 each; 4 to 6 ft., \$1.25 each.

Chestnut

ITALIAN or SPANISH CHESTNUT—Makes a fine, round-headed tree of great beauty. Flowers, in very long, slender spikes, are produced very profusely in spring. Bare root, 14 to 16 ft., \$5.00 each, \$40.00 per ten.

Catalpa

HARDY CATALPA—Very rapid-growing, tall tree with large, heart-shaped leaves, sometimes a foot long. A free bloomer, bearing panicles of white, fragrant flowers in June and July. Yields valuable timber. Bare root, 6 to 8 ft., \$1.25 each; 4 to 6 ft., 75c each; 3 to 4 ft., 50c each.

Thorn; Hawthorn

WASHINGTON THORN—Eastern United States. Easily one of our handsomest small trees. Leaves are triangular, lobed, deep glossy green, holding their color until very late in the fall, when they assume beautiful red and yellow tints. Flowers are white and borne late in spring, followed by large clusters of small, glossy, intensely red berries. Bare root, 4 to 6 ft., \$1.00 each.

CARRIER'S WHITE THORN—Of recent introduction. Tree upright, with yellowish bark and deep green foliage, which make a fine contrast, persists until quite late. The large white flowers which are produced in great profusion, followed by brilliant scarlet bunches of fruit, which hangs on until late in the winter, cause it to be very much admired. Bare root, 4 to 6 ft., \$2.00 each.

COCKSPUR—Eastern United States. Small, thorny tree, but very decorative. Bloom handsome. Fruit showy red, remaining on tree most of the winter. Bare root, 4 to 6 ft., \$1.50 each.

PAUL'S DOUBLE SCARLET THORN—Small tree, but larger than the others and of very erect, quick growth. Flowers produced in great profusion in early summer, bright carmine and double. Berries large, dull red, and borne freely. Very fine. Bare root, 4 to 6 ft., \$2.00 each.

ENGLISH HAWTHORN—Europe. Small tree or shrub with spreading branches and stout spines. Very fragrant, single, white flowers produced freely. Berries scarlet. The celebrated English hedge plant. Bare root, 4 to 6 ft., \$1.50 each.

DOUBLE WHITE HAWTHORN—A double-flowering form of the foregoing. Flowers usually become nearly pink before falling. Bare root, 3 to 4 ft., \$1.25 each.

ROSES THAT MAKE BEAUTIFUL GARDENS

Without doubt, roses are universally the most popular flower grown. Fortunately roses grow anywhere in California and do well.

We are the largest growers of budded roses in the United States, growing over 900 varieties. The following list is only a few of the choice varieties that we are growing, as it would take up too much space in the catalog to put in all the varieties that we grow. You will find some of the most recent introductions separately listed.

We are very proud of our roses, as they are of the best quality, strong, and well rooted. Owing to the fact that we have been growing over 1,000,000, we are in a position to give you roses that cannot be purchased elsewhere.

The reason we are selling these at the low prices is due to the fact that we grow them in large quantities, and you are getting them direct from the grower.

Roses should be planted from November to March, in order to have the bloom the first year. Climbing roses do not bloom until the second year.

Beautiful roses around a home change the entire environment and habits of the home, making life worth while.

Send your order in early, so as to get the desired varieties.

New and Scarce Varieties

\$1.00 Each

AMERICA—Hybrid Tea. This late introduction is a novelty, the value of which is being recognized by rose growers. The flowers are borne on long stems, are large, shapely, pearly pink, and possessing good substance. A wonderful keeper; stems are practically free from thorns.

AMELIA GUDE—Hybrid Tea. Another recent introduction. A unique and charming yellow rose, color of sunburst, with deeper shadings on the reverse; the blooms possess an individual beauty not frequently found in a rose with such big buds. For table decoration, corsage bouquets, baskets, it is an ideal rose.

CHEERFUL—Hybrid Tea. This is a rose with unique coloring and one very difficult of description. It has been referred to as a rich orange flame, the flame shade overspreading the petals. The base of the petals are orange yellow. The two shades create a color hitherto unknown in roses. The buds are long and pointed, the expanded flowers are large and spreading. With us it is mildew proof and blooms continuously throughout the season.

CRUSADER—Hybrid Tea. This new introduction of American origin breathes character, stability, and boldness in every line. Its growth is sturdy, its canes erect, its foliage heavy, its flowers are large, with petals nicely reflexed at the edges; color a rich velvety crimson; very free flowering.

CONSTANCE—Hybrid Tea. Flowers of beautiful cadmium yellow, coloring passing to golden yellow; large, full of globular form; the buds are long-pointed, orange yellow, streaked with carmine. Growth very vigorous, free branching, perpetual flowering; foliage glossy green.



Constance

DUCESS OF SUTHERLAND—Hybrid Tea. Bright rose pink. Buds very long pointed, borne on splendid strong stems carrying flowers perfectly erect. Very double. Petals large and very conspicuously veined. The bush is unusually good, vigorous, strong, and erect, with fine foliage and few thorns.

DUCESS OF WELLINGTON—Hybrid Tea. Flowers intense saffron yellow, stained with rich crimson, changing to deep coppery saffron yellow as the flowers develop; large, moderately full, opening well, of delightful fragrance. Growth very vigorous, erect, and very free flowering. A very valuable addition to this family of roses.



Duchess of Wellington

ELSIE BECKWITH—Hybrid Tea. A new English rose of rich, deep, rosy pink, borne on long strong stems. Sweetly scented, very vigorous, upright habit. Disease resistant. One of the best roses of the year.

GOLDEN EMBLEM—Hybrid Tea. (New.) A beautiful clear yellow in color, showing lovely buds and delicate crimson on outer petals; stem strong and upright; foliage a glossy green. A splendid yellow rose of good substance and a fine grower. A recent introduction destined to become very popular.

GOLDEN OPHELIA—Hybrid Tea. An excellent new seedling of Ophelia. The flower is of medium size, deep golden yellow in the center, paling slightly toward the outer petals; of perfect symmetrical form, and the plant is a sturdy, stiff-stemmed grower.

H. V. MACHIN—Hybrid Tea. Named after one of Great Britain's famous rosarians. Flowers intense, black grained, scarlet crimson, of gigantic size, full, of perfect form with high-pointed center, carried on rigid flower stalks; faintly tea perfumed. A most valuable exhibition rose of noble proportions.

ISOBEL—Hybrid Tea. A rose of real merit; single flowers of a rich, flushed orange-scarlet color with faint copper shadings and pure yellow centers and fine fragrance. Comparatively new on the Pacific Coast, hence worthy of trial culture; comes highly recommended.

K. OF K. (Kitchener of Khartoum)—Hybrid Tea. A rose of marvelous beauty and distinctness and one that will hold the highest place of admiration wherever it is grown. Named after the famous British soldier. Flowers of absolutely pure, intense scarlet color; its petals are velvet sheened, solid scarlet throughout, deliciously perfumed. A strong grower and most profuse bloomer.

MME. BUTTERFLY—Hybrid Tea. This new and splendid sport of Ophelia resembles its popular parent in general characteristics but has much deeper shadings of apricot and gold on a background of brilliant pink, and we find it to be a stronger grower and to produce more and larger flowers than Ophelia when grown outside. The plant is very vigorous and fine in habit.

SOUVENIR DE CLAUDIUS PERNET—Pernetiana. A new yellow rose which has come from Europe with a great reputation and is proving very satisfactory in this country. A vigorous, erect grower with brilliant green foliage and buds of exquisite shape on long stiff stems. Color a most striking sunflower yellow, deeper in the center, with no other color. An exceedingly free and continuous bloomer.

MISS LOLITA ARMOUR—Pernetiana. One of the most striking color combinations ever seen in a rose. As the flowers expand, they develop to a deep coral-red with a golden coppery-red suffusion, the base of the petals being a rich golden-yellow with coppery sheen. The flower is very double and cup shaped, and the vigorous plants are a continual mass of brilliant bloom.

SOUVENIR H. A. VERSCHUREN—Hybrid Tea. Large, well-formed flowers of deep apricot, passing to orange yellow.

WM. F. DREER—Hybrid Tea. This beautiful rose which has become exceedingly popular since its introduction in 1921, comes closer to possessing pure pastel shades than any other variety, displaying beautiful color combinations of shell pink, orange, and golden yellow, as the long pointed buds open into full, well-shaped blooms.

General Collections

\$.50 Each

AMERICAN BEAUTY—Hybrid Perpetual. Deep rose. Originated in France, where it never became very well known; then imported to this country; renamed and achieved an unequalled popularity, which is still maintained. This was all due to its success under glass, which still continues. Was originally named Madame Ferdinand Jamin.

ANNE DE DIESBACH—Hybrid Perpetual. Bright pink. Flowers are large, of strong texture and beautifully colored. Has the fragrance of the class well developed.

ARTHUR R. GOODWIN—Pernetiana. With us, apricot flushed salmon, fading through shrimp pink to flesh. Very rich indeed. Petals are very numerous and narrow, all strongly reflexed when the medium-sized flower is fully developed. Very free bloomer. Plant said to be vigorous, but with us practically a dwarf.

BABY RAMBLER or MADAME N. LEVAVASSEUR—Polyantha. Crimson. This is practically an extremely dwarf and continuous blooming Crimson Rambler. Does not mildew and blooms all summer.



Souvenir de Claudius Pernet



Baby Rambler or
Madame N. Levavasseur

BEAUTE DE LYON—Pernetiana. Has no resemblance whatever in color or form to any other rose. The half-developed flowers are much the same shade as a ripe tomato. The buds are curiously globular, with tips of petals overlapping; about saucer-shape when fully open. Blooms moderately. Bush is quite vigorous and rather thorny. Certainly a most unique variety.

BELLE SIEBRECHT or MRS. W. J. GRANT—Hybrid Tea. Bright rosy pink. Flowers large, well formed and sweetly perfumed. Buds are long and tapering. Grows vigorously and blooms freely. A thoroughly fine variety.



Betty

BETTY—Hybrid Tea. Coppery rose overlaid with ruddy gold. Buds long and pointed; moderately double; petals unusually large and conspicuously veined. Stems long. Fragrance rich. Altogether a fine sort that quickly secured high rank.

CAPTAIN CHRISTY—Hybrid Tea. Delicate flesh pink, medium to large. Petals have a satiny texture. Often included in the Hybrid Perpetual section, but as one of its parents was Safrano, it certainly belongs here.

CAROLINE GOODRICH—Hybrid Perpetual. Light red; very double; rich in fragrance; vigorous grower.

CLIMBING SUNBURST—Hybrid Tea. (New.) One of the most popular of the new roses. Its long and lovely buds, which open to large and full flowers of distinct and beautiful sulphured-yellow, cause it to be very much esteemed by rosarians.

CL. WHITE MAMAN COCHET—Tea. White, tinged pink. Flowers are indistinguishable from bush form. Growth rampant.

CLOTH OF GOLD—Noisette. Deep yellow center, tinted sulphur toward edges. Flowers large, full, and very handsome. An old variety which will always be popular on the Pacific Coast. A strong climber.

COLUMBIA—Hybrid Tea. Flower true pink, deepening as it opens to glowing pink; deliciously fragrant and produced on long, stiff stems. It is a free grower with beautiful foliage, the leaves on the stem are spaced just right to form a fine setting for the bloom. The stem is almost thornless.

CONRAD F. MEYER—Hybrid Rugosa. Splendid, large, elegantly formed buds and flowers, $3\frac{1}{2}$ to 4 inches across and perfectly double. Color is clear, silvery rose; vigorous grower, and constant bloomer. An outstanding rose.

CRIMSON RAMBLER—Polyantha. Well known. Blooms but once a year. Wonderfully showy in the early summer. Not fragrant.

CHEROKEE (Double White)—Pure white. Flower of medium size; very double and borne profusely in spring only. Considered a hybrid between Banksia and Cherokee, hence often called "Cherokee Double White."

CHEROKEE PINK—Cherokee. About the same as preceding except that flowers are noticeably larger and ruddy pink. Single.

CLIMBING BELLE SIEBRECHT—Hybrid Tea. Bright rosy pink. It frequently happens that climbing forms are inferior to their bush prototypes, but this magnificent climber considerably surpasses the bush variety. The flowers are colored the same as the beautiful Belle Siebrecht, but are considerably fuller and far larger; in fact, it is among our largest roses.

CLIMBING CECILE BRUNNER—Polyantha. A vigorous climber which may be held in the bush form by pruning. An exact counterpart of the great favorite, Mlle. Cecile Brunner, except that it is a much more robust grower. Always in bloom; flowers perfectly, double, rosy pink, petals in buds daintily reflected. Delightfully fragrant and in every respect a most exquisite rose.



Climbing Cecile Brunner

CLIMBING KAISERIN AUGUSTA VICTORIA—Hybrid Tea. White, faintly suffused lemon yellow. Identical with "Kaiserin" except in vigorous climbing habit.

CLIMBING LA FRANCE—Hybrid Tea. Bright salmon pink, with silvery reflexes; a fine old rose; very sweet.

CLIMBING LIBERTY—Hybrid Tea. A magnificent variety; color brilliant velvety crimson; bears large quantities of beautiful buds which expand into wonderful, highly colored open flowers.

CLIMBING MAMAN COCHET—Tea. Rose pink, with lighter, creamy yellow center. Growth extremely strong. Flower identical with the very popular bush form.

CL. MME. CAROLINE TESTOUT—Hybrid Tea. This most wonderful rose is identical with the most beautiful and very free-flowering rose, Mme. Caroline Testout, except that it is a very vigorous climber, canes making a growth of 12 feet in a season and an inch through. No garden should be without this magnificent rose.

DEAN HOLE—Hybrid Tea. Silvery carmine, shaded salmon. Buds enormous and very long pointed, opening into a mammoth flower of great substance. Growth strong and vigorous. A variety of great excellence, and useful for any purpose.

DOROTHY PERKINS—Wichuraiana Hybrid. Shell pink; blooms in spring only, when it is literally covered with innumerable dainty pink, double flowers. Foliage is glossy, attractive, and does not mildew. Sweetly scented. Very strong climber.

EMILY GRAY—Wichuraiana. A marvelous Wichuraiana with foliage like Berberis vulgaris; great substance and very glossy; flowers rich golden yellow and almost as large as "Madame Ravary." Without doubt the finest yellow Wichuraiana rose yet introduced.

ERNA TESCHENDORFF—Dwarf Polyantha. The color is a brilliant carmine red. It is a very free bloomer and has a permanency of color which has always been lacking in other roses of this class.

FLAME OF FIRE—Pernetiana. Flower deep, pure orange flame, intensely bright; sweetly scented. Growth sturdy and stout, holding its flowers perfectly upright; extra free flowering.

FRAU KARL DRUSCHKI—Hybrid Perpetual. Snow white. Flowers extremely large, yet beautifully formed. Blooms six inches broad are nothing uncommon. Growth is strong and vigorous, with abundant foliage. It is one of the very best bloomers in this division. Superb. Sometimes called White American Beauty.

GEORGE DICKSON—Hybrid Tea. Deep scarlet, shaded velvety crimson. The coloring is wonderfully rich, especially in half-opened flowers, the ground-color red with scarlet tips, while the inside of the expanding petals is nearly black. Large, very full, with enormous petals. Growth extremely vigorous, almost like a climber. Won the Gold Medal National Rose Society of England. A majestic rose whose imperious size, contour, color, and rare perfume, stamp it as a perfect rose without compeer.

GENERAL MAC ARTHUR—Hybrid Tea. Fiery red. In our last edition we said of this variety, "undoubtedly destined to attain the greatest popularity." Our confidence was well grounded and sales have increased every year. It has a magnificent color, is one of our very freest bloomers, possesses the richest fragrance, is healthy, vigorous, and not subject to mildew. Perfectly adapted to our climate.

GEORGE ARENDS—Hybrid Perpetual. Delicate pink. A large handsome rose of solid color and good form. Widely heralded as "Pink Frau Karl Druschki," but does not look like a sport from that variety. Growth is so rampant that it could easily be trained up as a climber and might be classed as such.



George Arends

GENERAL JACQUEMINOT—Hybrid Perpetual. Brilliant red. Very popular and likely to remain so. Flowers large and fragrant. Was introduced seventy years ago.

GORGEOUS—Hybrid Tea. Deep orange yellow, heavily veined and flushed deep reddish copper; large, full, and very free; a magnificent bedder and an ideal rose for any purpose.

GRUSS AN TEPLITZ—Hybrid Tea. Rich scarlet, overlaid with crimson, particularly in spring. The ground color is intensely red, unsurpassed by any other. A wonderfully free bloomer. Growth extremely vigorous, sometimes classed as a climber. An excellent garden variety and unexcelled as a hedge rose.

HADLEY—Hybrid Tea. Deep velvety crimson that does not fade; sweet scented; flowers of perfect form and good size. A standard and popular variety.

HARRISON'S YELLOW—Austran Briar. A splendid variety; flowers semi-double, which suffuse the whole plant with their bright golden yellow color and fragrance in the spring of the year. A rare addition to any rose garden.

HARRY KIRK—Tea. A favorite creamy yellow with bright amber center. Buds are much deeper in color, and long pointed. Open flowers are fairly double, saucer-shaped, and large. Fragrance is exceptionally fine. It is an exceedingly heavy bloomer. Bush grows vigorously, branches freely, and has rich, dark, glossy green foliage. About the best light yellow rose.

HOOSIER BEAUTY—Hybrid Tea. A vigorous grower and a persistent bloomer; rich, glowing crimson with deep shadings; bud long and slender and blooms large, full, and fine. A splendid rose and does well under all ordinary conditions.

HUGH DICKSON—Hybrid Perpetual. Brilliant crimson, tinted scarlet. A thoroughly fine rose. Has been fully tested in this climate and has been found perfectly adapted to it. Has large, finely formed, fragrant flowers; blooms well and is healthy and vigorous.

IRISH ELEGANCE—Hybrid Tea. This rose is deserving of a place in every garden. It is a most vigorous grower, and with us it is a most profuse bloomer. It possesses a combination of colors found in but few roses. The long-pointed buds are deep maddery orange, splashed with crimson, expanding to large single flowers of rich, satiny old gold. As a bedding and decoration rose it has but few equals.

JONKHEER J. L. MOCK—Hybrid Tea. A good grower and a free bloomer in summer; flowers produced in profusion of a rich carmine, changing to bright pink with a silvery reflex; stems strong and erect.



Jonkheer J. L. Mock

JOSEPH HILL—Hybrid Tea. A perfect gem and remarkably free-flowering; in color a lovely shade of salmon-pink; the perfect flowers are large, full, and double.

JULIET—Pernetiana. Outside of petals old gold, interior rich rosy red, changing to deep rose as the flowers expand. The effect in the expanding bud stage is indeed striking; the edges and tips of petals roll back slightly and show an intense contrast of bright cherry against the buff shade. Flowers are rather large, double, fairly fragrant, and borne in moderate quantity. Bud is handsome, growing vigorously.

KAISERIN AUGUSTA VICTORIA—Hybrid Tea. Universally known in California and easily the most popular white variety in this division. Flowers are large, full, and beautifully formed, with reflexed outer petals. Bush robust and healthy.

KILLARNEY—Hybrid Tea. Flesh suffused pink. Semi-double. Buds long pointed and very beautiful. Free blooming. Very fragrant.

LADY DUNLEATH—Hybrid Tea. Pale yellow, with deep golden center; surpassingly graceful and dainty at every stage. The buds are remarkably long pointed and slender; flowers cupped as the bloom expands when color greatly deepens. Free blooming and delightfully fragrant.

LADY HILLINGDON—Tea. Deep apricot yellow. The color is solid without any shading and absolutely unique; it never fades. The new wood and long stems are deep violet, making a contrast with the flower that is unique. Growth is strong and vigorous. Foliage at first dark violet, turning deep green. Flowers are large and loose, with long, pointed buds and remarkably large petals.

LADY MARY WARD—Hybrid Tea. A beautiful orange, shaded deeper with a metallic sheen and touches of bronzy red. A superb and vigorous grower of erect habit and free blooming characteristics.

LADY URSULA—Hybrid Tea. The color is a beautiful shade of light pink; of good form and substance; petals large, circular, and delicately perfumed; a remarkably upright grower.

LA FAYETTE (Joseph Guy)—Polyantha. This is a new Baby Rambler. The dwarf, bushy growth, clustered flower heads, and continuous blooming are conventional, but nothing like the magnificence of size of bloom has ever before appeared in the class. The individual flowers are fully as large as Paul's Scarlet Climber, semi-double and prettily ruffled.

LOS ANGELES—Hybrid Tea. Of California origin. It has acquired a world-wide reputation and is without doubt one of the finest of roses. Growth very vigorous and producing a continuous succession of long-stemmed flowers. Flowers of a luminous flame, pink, toned with coral and shaded with translucent gold at the base of the petals. The buds are long and pointed and they expand into a fragrant, beautiful flower of the largest size, the wealth of color being maintained from the incipient bud until the last petal drops. In richness of fragrance it equals in intensity the finest Marechal Neil.



Los Angeles

LA FRANCE—Hybrid Tea. Pink, tinted silvery blush. Flowers large and borne freely. Delightfully fragrant, excelling nearly all others in this respect. One of the favorites.

LAMIA—Hybrid Tea. Flowers intense reddish orange, of medium size and charming form in the bud and beautifully colored when expanded. A vigorous grower and grand for massing.

LAURENT CARLE—Hybrid Tea. Brilliant, velvety carmine; flowers large, of perfect form and delightful fragrance; a good grower and abundant free bloomer. A wonderful bedding rose.

LE PROGRESS—Hybrid Tea. Very free blooming rose; the nankeen-yellow flowers are large and full.

LOUISE CATHERINE BRESLAU—Pernetiana. A unique rose, varying from a coral-red in its long-pointed bud to reddish coppery orange in the full, fragrant globular flowers. Will find a welcome everywhere on account of its large flowers and fine coloring. The foliage is remarkably thick, glistening bronze-green.



Louise Catherine Breslau

LYON—Hybrid Tea. Shrimp pink, or coral-center, salmon shaded chrome yellow. Its color is gorgeous, form unsurpassed, and fragrance delightful. Flowers are occasionally of enormous size, but always faultlessly formed.

MME. BUTTERFLY—Hybrid Tea. A brilliant sport of Ophelia which is attracting much attention; flowers of a brilliant pink, suffused apricot and gold; an unusually fine bedding rose, which under good care will produce a profusion of flowers all summer. Buds are carried on erect stems; is highly regarded as a greenhouse plant.

MME. CAROLINE TESTOUT—Hybrid Tea. Bright pinks, almost too well known on the Pacific Coast to require description. The official city flower of Portland, Oregon. Flowers of the largest size and beautifully formed. Free blooming; vigorous and healthy.

MME. COLETTE MARTINET—Hybrid Tea. One of the most popular of the new roses. Buds long, old, golden-yellow, opening into medium-size flowers of a deeper yellow. Very free flowering.

MME. EDOUARD HERRIOT or DAILY MAIL Pernetiana. The flowers moderately large and semi-double; buds perfectly formed and magnificently colored; a free-blooming rose. Its floriferousness surpasses everything else. It is not only profuse, but continuous. Called "Daily Mail" as a result of winning gold cup offered by that paper for best new rose at International Horticultural Exposition, London, in 1912. As a bedding rose it stands in a class by itself. Its many precious qualities warrants its having a prominent place in every garden.

MAGNA CHARTA (Margaret Dickson)—Hybrid Perpetual. White with flesh center; petals large and of firm texture; quite fragrant. A standard popular rose.

MARIE VAN HOUTE—Tea. Creamy yellow, tinted rose on the outer petals. Buds and opened flowers are full and handsomely formed. Growth vigorous.

MARSHALL P. WILDER—Hybrid Perpetual. Extra large, full flowers of a dark, deep red color; strong grower and free bloomer; handsome.

MELODY—Hybrid Perpetual. Saffron yellow with primrose edges and tips. Flowers are of medium size, sometimes large, particularly in fall; very double, but always opening freely into a lovely flower with reflexed outer petals and fine center. The fragrance is delightfully rich. Plant grows vigorously, has very dark green foliage, which is violet when young and mildew proof at all ages. Stems long, slender, and stiff.

MISS ALICE DE ROTHSCHILD—Tea. Deep yellow center with lighter edges. Buds rather light, but color deepens as they expand. Flowers are of medium size, very full, pointed in bud, cupped when open, with a rich tea fragrance. A valuable addition to any collection of choice roses.

MRS. AARON WARD—Hybrid Tea. Yellow, tinted salmon rose. Color variable. In spring it is nearly white outside, with blush of light salmon center. In the fall color deepens to a good yellow. Handsomely formed on strong stems.

MRS. AMBROSE RICARDO—Hybrid Tea. An exceptionally strong grower and free bloomer; flowers are quite double, of good form, a bright flesh-pink in color, overlaid with a delicate tinge of yellow, and delightfully fragrant. A rose that comes highly recommended by rosarians who are growing it; should be a feature in every rose garden.

MRS. A. R. WADDELL—Hybrid Tea. Orange pink or reddish salmon, outer petals flesh, of medium size and semi-double. Highly colored and very free blooming. Foliage dark, glossy green.

MRS. CHAS. RUSSELL—Hybrid Tea. A fine variety of American origin. The color is rosy carmine with rosy scarlet center. The blooms are large, globular, and of a fine form. The bush is strong, sturdy, of branching habit, and produces an abundance of beautiful blooms; possesses leather-like foliage.

MRS. FRANKLIN DENNISON—Hybrid Tea. Flower porcelain white, primrose yellow, deepening to ochre at the base; of enormous size, beautifully pointed buds of great substance; delightfully perfumed.

MRS. GEORGE SHAWYER—Hybrid Tea. Brilliant rose pink. Almost solid color. Large, full, and well formed. Highly recommended for forcing.

MRS. JOHN LAING—Hybrid Tea. Shell pink. Easily one of the best pinks in this division. Flowers are beautifully colored and finely formed, extremely fragrant, and borne freely on strong stems. Splendid for cutting. A good variety.

MRS. MACKELLER—Hybrid Tea. Flower center solid deep citron or delicate pure canary, becoming pearly primrose white as the blooms expand; large, with high-pointed center, produced on vigorous flower stalks; very fragrant. Growth vigorous, stiff, and erect.

MRS. W. C. MILLER—Hybrid Tea. Large, globular peony-flowered blooms of light pearly pink, shaded salmon, darker on the outside of the petals. A free bloomer and a most excellent bedding variety.

NILES COCHET—Tea. Cherry red on outer petals, lighter within. A sport from the popular Maman Cochet and a far better rose. The pink of the latter replaced by a bright red, which at some seasons becomes decidedly brilliant. It is a remarkable free bloomer, particularly in the fall, at the very time its color is at its best.

OLD GOLD—Hybrid Tea. Coppery orange. The long slender pointed buds are vivid orange-red, tinted apricot; flowers semi-double with about two rows of petals. Very fragrant. A good grower and free bloomer; foliage glossy green.

OPHELIA—Hybrid Tea. Salmon flesh shaded rose with chamois center. A rose that is lovely at every stage. The buds and flowers are beautifully formed and colored, enhanced by rich veining on the petals. Stems long and carry flowers erect.

PAPA GONTIER—Tea. Rosy crimson, with carmine center. Only moderately double, but has most beautiful buds. One of the freest blooming roses known. Perfectly adapted to California conditions and probably is still the most popular variety in the state.

PAUL NEYRON—Hybrid Perpetual. Dark rose. The largest rose in cultivation. The buds are larger than the best American Beauties grown under glass and are borne freely in the open ground. Growth is strong and vigorous.

PERIE D'OR—Polyantha. Golden yellow, with orange center. Another duplicate of Mlle. Cecile Brunner except for color, which is also entirely distinct from that of Etoile d'Or. A very beautiful little rose.

PERSIAN YELLOW—Austrian Briar. Bright yellow. Small but quite double. Foliage faintly scented. Particularly interesting as being one of the parents of the wonderful Pernetiana class.

PREMIER—Hybrid Tea. Flowers pure rose pink, borne on stiff, thornless stems; deliciously fragrant. The habit is perfect, the growth quick and free. Its freedom of bloom and quick succession of crops makes this a most productive forcing variety, as well as being a popular sort for out-of-door culture.

RADIANCE—Hybrid Tea. A popular American rose that blooms all summer; it has long, upright stems, perfectly formed flowers of a lovely rose pink color.

RAYON D'OR—Pernetiana. Clear, bright cadmium yellow; buds are a coppery orange, slightly flushed carmine, but the open flowers have a shade of yellow that is certainly distinct, and are fairly large, double fragrant, and borne continuously. A moderately vigorous grower.

RED LETTER DAY—Hybrid Tea. A strong, vigorous grower and free bloomer; flowers semi-double, of a most vivid crimson-scarlet color, rendering the plant a striking object in the garden; fine for cutting.

RED RADIANCE—Hybrid Tea. A superb rose of American origin; flowers of a lovely deep red color, with erect stems, and borne all through the summer. Similar to Radiance in every respect except in color.

REINE MARIE HENRIETTE—Hybrid Tea. Cherry red. A great favorite among the climbers. Flowers are very large, full, freely borne, attractively colored, and fragrant. An old standard variety which maintains its popularity.

RICHMOND—Hybrid Tea. Scarlet, lightly shaded crimson. In the bud this closely resembles Liberty, but as the flowers open the color is better retained. Blooms freely and has good fragrance.

SILVER MOON—Hybrid Wichuraiana. One of the most satisfactory and indispensable climbing roses. This extraordinary climber is covered with rich dark green foliage, a fitting background for the large semi-double white and creamy flowers, often 4 inches in diameter, that are borne in great profusion.

SOLIEL D'OR—Pernetiana. Fine golden yellow, shaded nasturtium red. Flowers large, very full and rather flat. Free blooming and extremely hardy, thriving readily in regions too cold for those with Tea bloom.

SUNBURST—Hybrid Tea. Yellow, shaded coppery orange, outer petals lighter. It is large, magnificently formed and richly Tea scented. Form is long and cup-shaped when fully expanded. No other yellow in this division has attained a greater popularity.

SUNSET—Tea. Golden amber with a faint ruddy tinge. A sport from the Perle des Jardins and the equal of that fine variety. New foliage is very beautiful.

TAUSENDSCHOEN—Polyantha. Delicate pink, shaded rosy carmine. Produces a great mass of bloom in spring. Wood is brown and absolutely thornless. There are a few prickles on the leaf-stalks. Does not mildew. An old sort that has many admirers.

ULRICH BRUNNER—Hybrid Perpetual. A rose of standard excellence; flowers light cherry red, tending toward scarlet, with a tint peculiarly its own and produced in abundance on long stems, maintained by a plant unusually robust.

WM. ALLEN RICHARDSON—Noisette. Orange yellow. Flowers rather small, but well formed and borne very profusely. This, with its vigorous growth and healthy constitution, makes it a valuable and popular climber.

WHITE KILLARNEY—Hybrid Tea. A sport of Pink Killarney and its equal in quality. Flowers are of fine shape and substance, not unlike Sunburst, and are borne in abundance. One of the best hybrid teas in cultivation.

WHITE MAMAN COCHET—Tea. The greatest of all the Cochets. Buds and flowers are magnificently formed and borne very freely. Like Maman Cochet, the stem is rather weak for the enormous flowers, otherwise almost faultless.

WILLOWMERE—Pernetiana. A really fine rose of a pronounced coral-red color, suffused with carmine in the bud state, which opens to a large, full, handsome flower of a rich shrimp-pink, shaded yellow in the center and flushed carmine-pink towards the edges of the petals.

Beautiful Standard Tree Roses

\$1.50 Each

Belle Siebrecht
Cheerful
Columbia
Golden Emblem
Hadley
Hoosier Beauty
Hugh Dickson
Irish Elegance
Irish Fireflame
K. of K. (Kitchener &
Khartoum)
Kate Moulton
Lady Pirrie

Lady Hillingdon
Los Angeles
Mme. A. Chatenay
Mme. Ed. Herriot
Mme. M. Soupert
Mme. C. Testout
Miss Cynthia Forde
Miss L. Armour
Mrs. A. Ward
Mrs. Chas. Russell
Mrs. W. C. Miller
Rose Marie
Sunburst

The Growing of Roses

Rose growing is not a difficult task—in fact, it is a very easy one. The essential factors necessary for the growth of any plants are all that are required for the cultivation of the rose. With this fact well in mind even the inexperienced grower will secure satisfactory results.

The Rose Has Many Uses

The rose is a flower that is useful as well as ornamental, and, therefore, enjoys an unexcelled popularity. Every yard should possess a few roses for beautifying purposes alone. Besides this they may be used as hedges, borders in parking spaces, and evergreen specimens. The climbing rose is an excellent means of concealing unsightly objects such as stumps, rocks, and trellises. It may be trained to make a most attractive covering for pillars and to furnish shade for the porch.

When to Order Roses

Late fall or early spring is the best time for planting roses, but they may be ordered from your dealer any time during the year. The plants are dug in the fall and if climatic conditions are suitable this is a good time for planting, as the plants will not have to be kept in storage through the winter.

The spring is the safest time to plant roses if it is done early. Dormant roses should be planted when the first tree blossoms appear.

Useful Hints

More than one bush of each variety should be ordered, for plants vary in quality just as any other class of merchandise varies. Three is a good number to order of the Hybrid Teas or Teas and one of each class of climbers.

The Early Bird Catches the Worm

An early order insures satisfaction. Give your nurseryman a list of roses that may be substituted to avoid delay and disappointment. Do not fail to specify when the order is to be shipped.

How to Plant Roses

Roses should be planted immediately upon arrival, providing the soil is neither frozen nor in a soggy condition. They should be taken from the package in a sheltered place and all damaged roots cut away. If the tops have not already been cut back they should now be cut to six inches and all weak growth removed. The plants should then be taken to the bed for planting, keeping the roots damp either with wet burlap or in pails of water.

Be sure that the hole is large enough for the roots. Try to place the roots in the same position as they were before they were dug. Set the budded rose deep enough so that the bud is one to two inches below the level of the bed. The bud may be recognized by a characteristic twist where the plant joins the root, and it is generally larger than the rest of the stem. Just below this bud is the wild stock; just above is the real rose. This rule does not apply to climbers, as they can be planted the same depth as they were before they were dug.

Plant Polyanthas, Teas, and Hybrid Teas about eighteen inches apart; Hybrid Perpetuals thirty inches; set climbers singly. If they are used for hedges six feet apart is best, but in some cases three feet will do.

When the roses are planted the roots should be spread out as naturally as possible and the soil packed compactly around them. Pack the soil hard with your feet. If the earth is very dry the roots should be covered with a fine, loose soil and the hole filled with water. When it has thoroughly drained it should be filled with soil, but not treaded as the water settles the earth sufficiently.

Roses should be cut often. Early in the morning is the best time to cut them. Use a sharp knife or scissors and allow two leaves of the flower stem to remain on the bush. When cut-flowers are to be sent any distance, allow them to stand in water several hours in a cool, dark place.

Cutting Back

Pruning is very essential to good roses. As soon as the protection is removed the dead shoots should be cut off. All the old canes of the Hybrid Perpetuals should be

cut to the ground or to where any new shoot appears on them. However, if this takes too much of the bush the older canes may remain if the shoots of the previous year are shortened to a few buds. Do not be afraid to cut back one-half the canes which remain.

The same rules may be applied to the Hybrid Teas and Teas with the exception that the new, weak wood should be removed as well as the old.

The hardy climbers require no pruning in the spring except cutting off any dead canes, and as soon as the blooming season is past those that have bloomed may be removed.

Suggestions for Pruning

Removing dead wood is all the pruning necessary for bush roses.

If branches cross in the middle of a bush one of them should be taken out.

All canes on bush roses should attain a uniform height.

Weak-growing canes require more pruning than the stronger ones.

Make clean cuts with sharp shears or knife.

Cuts should be slanting, a quarter inch above a bud pointing in the desired direction.

Spraying of Roses

After pruning, the roses should be raked and sprayed. Lime-sulphur is a good fungicide. The soil should then be worked with well-rotted manure or any other commercial fertilizer. When the leaves unfold, spray them every two weeks with a sulphur-lead preparation. A nicotine solution will destroy any aphides that appear. If a few beautiful specimens are desired remove any unhealthy buds, leaving just one good bud to a shoot. When the color appears as the leaves open the bushes should be nourished with manure water or any other liquid fertilizer.

No more care is required for the cultivation of the rose than for any other plant, and you will feel amply repaid when you see the results of your work—a beautiful rose garden.



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